

THE MICHIGAN FARMER,

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Relating to the Farm, the Garden, and the Household.

NEW SERIES.

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The Michigan Farmer,

R. F. JOHNSTONE, EDITOR.

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The Farm.

Field Culture of Root Crops—Beets, Carrots and Parsnips.

The importance of having an abundance of roots, for the use of stock during the winter has scarcely yet been sufficiently appreciated by the generality of American farmers. With a good supply of sugar beets, or of mangold wurtzel, or of carrots, parsnips, or ruta bagas, all kinds of cattle may not only be carried through the most trying season of the year in excellent health and condition, but with superior economy. As a food for milch cows, a bushel of sugar beets, carrots or parsnips, to each head of stock daily, when finely sliced and mixed with cut hay, straw, corn fodder or chaff, will not only largely increase the yield of milk, but will improve, to an equal degree, the quantity and quality of the butter. Perhaps, in the case of milch cows, the carrot and the parsnip, from their containing more nutritive matter, should have the preference over the sugar beet; but the latter will always commend itself to the attention of the dairy farmer, from the certainty of the returns which it makes per acre, under skillful cultivation, and from the fact that its lower series of leaves may be frequently stripped off during the progress of its growth, and fed to stock, without inflicting any perceptible injury to the crop. There is also another advantage in cultivating roots, which deserves to be taken into account: they leave the land in the best possible condition for succeeding grain crops.

The chief constituents are lime, soda, potash, and common salt. The amount of the latter in the roots and tops of the Beets and the Carrots, is quite remarkable, and it accounts for the fact that is recorded in the *Edinburg Quarterly Journal of Agriculture*, which cites an instance wherein the application of 3 cwt. of salt to an acre, not with the

intention of benefitting the crop, resulted in increasing the yield of beets from twenty-six to forty tons per acre—thus showing, both from analysis and from practical experience, the absolute necessity of supplying to these crops, either in the manure that is used, and which invariably contains a greater or less quantity of Chloride of Sodium—common salt—or by direct application, a due proportion of those mineral elements which are most essential to vigorous growth of the plant. In an experiment conducted by an English agriculturist, to ascertain the largest product of ruta bagas which could be raised upon an acre of ground, he found, by analysis, that one ton of this root, when dried and reduced to ashes, contained twenty five pounds of mineral constituents. One half of these consisted of potash, one-third soda, one-eighth sulphuric acid with a little magnesia, the remainder being lime, per-oxide of iron and common salt. To furnish the potash and soda, he applied to each acre thirty bushels of wood-ashes, mixed with 200 lbs. of Ichaboe Guano—the use of the latter being to make up the deficiency in the phosphates. To these he added saw-dust, with which he had previously bedded his hog pens, and a small quantity of sulphuric acid. He thus supplied to the field all the elements contained in the ash of the ruta baga. The result of the application showed itself at the gathering in of the crop. Upon the poorest portion of the field, the yield per acre was nineteen tons and three-quarters; and upon the remainder of the land, twenty-three tons per acre. The soil best adapted to the cultivation of the sugar beet—and we select this as the type of all root crops—is a deep, loose mould, rather moist than dry, into which its long tap-root can penetrate with ease, and through which its finer fibres can ramble freely in search of nourishment. Grass lands that have been broken up the previous season, and from which a grain crop has been taken, are admirably suited to the cultivation of the beet; for by the time of planting the second year, the turf, and roots will have become completely decomposed, and the mellowed which has thus been formed, will permit the air to pass freely through the soil, while the superabundance of decayed vegetable matter will absorb and retain the requisite amount of moisture. Low grounds should not, however, be chosen; especially where there is danger of the crop being drowned out if a wet season should occur. Neither should the field be too high and steep, for in that case the rains which should nourish the plant, will rarely enter the soil to a sufficient depth. A mean betwixt these two extremes is, therefore, best, where the soil is suitable, and a choice of selection can be had.

Preparation of the Soil.—In preparing the land for the reception of the seed, deep plowing and thorough tillage is of primary importance. It is in the cultivation of roots of every description, that the subsoil plow will be found of the greatest service. The latter may be dispensed with in growing grain crops, or in setting land down to grass; but for corn, beets, carrots, turnips and parsnips, whose tap roots and lateral fibres require abundance of room, both to descend below the surface and to spread themselves laterally, subsoiling is of signal advantage.

Before the land is plowed, twenty two-horse cart loads of well rotted stable manure; thirty bushels of wood ashes; three bushels of refuse salt; five bushels of crushed bones and one bushel of plaster mixed together, one half of which should be broadcasted over each acre, reserving the other half for the drills. Next harrow, cross harrow, and roll. When this work has been accomplished the field should be laid off in drills thirty inches apart, and in these drills should be spread the remaining half of the mixed manures and fertilizers. Wherever the manure cannot be spared, or the process is regarded as tedious or difficult, the following mixture may be recommended as equivalent to that which is in common use in England:

Manure of Guano three cwt.; Salt three bushels; Plaster one bushel—mix. Spread, in this instance also, one-half broadcast before plowing, and the remainder in the drills. Throw the drills together with two bouts of the plow, and roll lengthwise to flatten down

the ridges. The land is now ready for the seed. If that seed be of the beet, it should be steeped in lukewarm water forty-eight hours before using it, when it may be drained and seeded, either with the hand, or, what is much better, by the aid of a drill harrow.—If it be carrot or parsnip seed—for the same preparatory tillage of the soil is required for every description of root crop—the seed should be mixed with moist sand twelve hours before it is sown, and should then be scattered, by a straight cast of the hand, thinly and evenly along the drills, which should in no case be marked out more than one inch in the depth.

Time of sowing.—From the middle of April to the middle of May.

Quantity of seed to the acre.—Of beets, four lbs.; of carrots and parsnips, respectively, two lbs.

After culture.—Before the plants get into rough leaf, dust them every morning, while the dew is on, with a mixture of soot and wood ashes, as a preventive against the fly and bug. When they are about three inches high thin out the beets, to stand ten inches apart in the row—the carrots to 4 inches apart, and the parsnips to six inches. Weed between the plants with the hand, and a narrow weeding hoe, and run the cultivator between the rows. A second and third hoeing should follow at intervals of two weeks, when the shovel plow should be used to loosen the soil between the rows and should be followed by the cultivator. At the final working, the earth should be drawn about the roots, when the soil should be again stirred, and the process of culture is completed.

Harvesting and Storing.—About the commencement of October; or when the leaves begin to turn yellow, and during dry weather, the beets and carrots should be taken up, and their tops cut off about an inch from the crown. After being suffered to remain for a few hours to dry, they should be removed either to a sheltered spot where a pen has been prepared for their reception, on the south side of a stone wall or a close board fence. They should be piled up in the form of a pyramid, and covered over thickly, either with corn stalks, or refuse hay, or straw, or with all of them to prevent the hardest frost from penetrating into the heap. A foot thick of soil may now be put over the rough covering, and boards placed slantwise against the wall to turn off the snow, or rain, or sleet. But the securest method of all is to pack the roots away in dry sand, like cord wood, in a cool deep cellar, where they can be easily obtained for use at any time during the winter, and where the frost cannot penetrate.

Average yield.—The average yield of the sugar beet under such cultivation as we have recommended, may be set down at eight hundred bushels to the acre. Larger crops than this have frequently been gathered, but they were raised under a system of high culture, and by very heavy manuring. The yield of carrots may be safely estimated at six hundred bushels to the acre, and of parsnips at eight hundred bushels. The latter possess the peculiar advantage of hardiness, and in this latitude may be suffered to remain in the ground all the winter.

Prolific Sheep.

F. E. Eldred has on his farm twelve south-down ewes, which, during the present spring, have borne twenty-two lambs. Can any of our readers give a better account of the stock this season?

The Cattle Plague.

Recent accounts from Galicia and the eastern provinces of Austria state that the Rinderpest is making great havoc among the cattle, and the authorities are greatly alarmed at its prevalence. All cattle coming from the Austrian dominions into the Prussian provinces are subjected to a quarantine of twenty one days.

Poisoning Seed Wheat.

A correspondent of the *Country Gentleman* states that in 1857 he determined to try an experiment with his seed wheat, and for that purpose took the clear urine that came out of his cow stable, and which was unmixured with manure, steeped his seed wheat in it for six hours, and then drew the seed off by rolling it in lime. The result was that the wheat never came up. The germ was effectually killed.

Spring Management of Sheep.

The foddering season is about to be suspended in this latitude, after so long a confinement to dry food, and flocks will soon be turned out to pasture. Every experienced flock-master knows that this is the most critical period for sheep, of the whole year, especially for the fine-wooled varieties. The chilling rain storms which annually come at this season; the change from dry to green feed; the feeble and delicate condition of many of the flock—old ewes heavy with lamb in particular—all these circumstances together greatly increase the duties of the owner, making constant care and watchfulness necessary until the period of yearning is past.

Whenever storms occur, sheep should be got under shelter with as little delay as possible. Where they have been closely confined during the entire foddering season, there is much danger in letting them out at once to remain in the field all the day—the flashy, watery herbage producing scours, which often destroys great numbers of those low in flesh and feeble. A much better plan is to let the flock out for a few hours each day, for a week, giving at the same time a full feed of hay and grain, and plenty of salt.—When sheep have had a free supply of roots through winter, and during the latter part of winter, there is little danger to be apprehended from a sudden change from dry food to pasture.

An important object with the careful flock-master, is to keep his entire flock in equal condition as far as possible. In large flocks, there are always more or less, which, on the opening of spring, are poor, comparatively, and feeble—such as ewes heavy with lamb, and yearlings. These should, by all means, be forthwith separated from the main flock, and receive extra attention.

Tagging the Sheep.—Before sheep are allowed to go to pasture, they should be thoroughly tagged; that is, all the wool from the dock down between the thighs, should be clipped; then if sheep scour, the fleece does not become filthy. Many valuable sheep are annually lost by a neglect of this trifling duty. The wool about the thighs becomes a mass of filth—often fly-blown—and if not attended to early, the sheep is lost. If properly and seasonably tagged, the labor of washing the sheep is diminished one half. The process of tagging may be interesting to the uninitiated. Set the sheep on his rump, on a clean floor, or on a shearing table. If a wether, cut the wool away from the sheath and scrotum; then shear from the inside of the thighs, and down the leg to the fetlock, grasping both feet with the left hand and drawing them towards him; the shearer can then clip all that is necessary at out the dock. With the ewe, the wool should be sheared from the bag and immediately about it, which permits the lamb, in its first attempts, to find the teats readily, and often saves it from being chilled and prostrated. The sooner a lamb gets nourishment, after it is dropped, the better. Ewes heavy with lamb, require to be handled with the utmost care, and the owner should never entrust this duty to careless hands, without being present to see that the most humane care is exercised.

If the hoofs of sheep need cutting or paring, now is the time to do it. While one person holds the animal on his feet, another is ready with a sharp chisel and a mallet, and cuts off as far as the hoof is turned or broken.

The Lambing Season.—Ewes should be kept as quiet as possible, during pregnancy, and treated in the most kind manner.—They should not be kept fat, but in good store condition through this period, and be thoroughly protected against storms. A strong, healthy offspring need not be expected when the ewe has been poorly fed, and exposed to all the rigors of a northern climate. The mother must have strength to sustain her, at lamb-birth, and good condition to support the lamb and give it size and thrift.

The field where the ewes are to fold should be dry and free from knolls and hollows, as in such situations they are likely to get cast and die. The flock-master should pass over the field two or three times during the day,

to guard against such accidents. Our common ewes seldom need assistance at the time of lambing. This is not the case, however, with those highly bred. They often require aid, especially if they are in either high or low condition. But let the owner not be hasty in offering his assistance; “while the throes are natural and the strength continues, no motive of curiosity should induce him to come near—not till the ewe seems to be losing strength, should he interfere at all.”—“Nature,” says Youatt, “in the course of twenty-four hours, will, in a great majority of cases, accomplish that which cannot be hurried on by art without extreme danger.”—When aid is necessary, it is apt to frighten the ewe, and if she escapes immediately on the birth of her lamb, she will often refuse to own it. It should, therefore, by some means be at once placed before her, that by the scent and form she may recognize it as her offspring. If she should continue to refuse to own it, she must be held, and a teat placed in the mouth of the lamb—an alternative which seldom fails of success.—C. Berres, in *Ohio Farmer*.

Proposed Practice with Potatoes.

R. F. JOHNSTONE, *Dear Sir:*—At a meeting of the Plymouth Farmer's Club, held on Monday, April 2d, after discussing the management of the potato crop, the following proposition was submitted and adopted, viz:

That each member of the club be requested to prepare, and plant with potatoes, one eighth of an acre, as an experimental plot.—The ground to be planted in rows, both ways, as follows, viz:

One sixth of the rows with one eye in a hill.
One sixth of the rows with two eyes in a hill.
One sixth of the rows with one-eighth of a potato in a hill.
One sixth of the rows with one-fourth of a potato in a hill.
One sixth of the rows with one half of a potato in a hill.
One sixth of the rows with a whole potato in a hill.

The cultivating to be done across these rows, as follows:

One fourth, by covering the plants as soon as they are out of the ground.
One fourth, by hilling as usual.
One fourth, by hilling slightly.
One fourth, by plant culture.

Thus dividing the plot into twenty four compartments; the yield and quality of each to be separately reported at a meeting of the club to be held next November. The whole to be hoed twice, in good season, or previous to the setting of the young crop.

This proposition grew out of the very varied experience of different members of the club, as to the effect of cutting seed; and also of different modes of culture. The proposition to cover up one fourth, at the first hoeing, is for the purpose of determining whether or not, the yield is affected, if the tops of the plants are covered, in the process of killing the weeds, at the first hoeing, if that is done very early. This is published, with the hope that others may be induced to join us in the experiment, and report through the FARMER.

T. T. LYON, Secretary.
Plymouth, April, 23d, 1860.

Progress in Gratiot County.

As a natural consequence of the fact of our splendid soil, surpassed by none in the State, and the excellent opportunity for procuring lands cheap, i. e. from 25 cents to \$1.25 per acre, new comers in pursuit of homes are beginning to flock into our county. We hear of many new entries being made in both State and Government lands. The North-east township of our county, which has hitherto been overlooked, is now being settled. Five new houses have been built there and as many new improvements commenced within a very short time. Each house contains at least one family. There is also a certainty that others will soon follow, and form a settlement sufficiently large to have a summer school. A citizen who was through that township last week, says that it contains a great deal of very excellent land, and that many choice locations are yet untaken at from 25 to 50 cents per acre. Strangers in that direction will find Bernard Fox, Esq., ready and willing to aid them in selecting good locations, and we believe it has been with him a labor of love, rather than profit.

“Come all ye” that desire good farming lands at a cheap figure. You can be suited at the figures above named, and get 40 acres of State land for a homestead “without money and without price”—*Gratiot News*.

The Breeding of Shorthorns.

The editor of the London *Agricultural Gazette* in noticing a sale of Shorthorns, recently, not bred from the Bates or Booth families, but direct from the old stock of the Messrs. Collings, remarks upon the effect of in-and-in breeding, and how it comes that so many of the best Shorthorns of the present day trace back on both sides to *Favorite* 252 of the English Herd Book, and takes for example one of the cows which is to be sold, called *Charmer*. These remarks we think will prove acceptable to many who feel interested in Shorthorn stock:

"What proportion of the intrinsic value of a bull or cow is due to individual character, and what to the influence of pedigree? Of course this individual character of the animal is itself the result of pedigree, and the question is thus indefinite. But it may be often noticed that two animals, and still more two herds shall differ in appearance, though similar in pedigree—and even that the better looking beast shall have the inferior descent. The calves of old cows by old sires may not be so valuable for breeding purposes as those of more vigorous parentage; and generous treatment, as compared with half starvation from calf-hood upwards, will produce very different animals. The old saying, that 'beef is made of veal,' and that 'breed goes in at the mouth,' are the proverbial expressions of the same truth.

"It is, however, unquestionable, that the ability of cow or bull to transmit the merit either may possess, does in a great degree depend upon its having been inherited by them through a long line of ancestry. Nothing is more remarkable than the way in which the earlier improvers of the Shorthorn breed carried out their belief in this. They were indeed driven by the comparative fewness of well-bred animals to a repeated use of the same sire on successive generations of his own begetting, while breeders now-a-days have advantage of fifty different strains and families from which to choose the materials of their herd; but whether it were necessity or choice, it is certain that the pedigree of no pure-bred Shorthorn can be traced without very soon reaching many an illustration of the way in which 'breeding in-and-in' has influenced its character, deepened it, and made it permanent, so that it is handed down unimpaired and even strengthened in the hands of the judicious breeder.

"What an extraordinary influence has thus been exerted by a single bull on the fortunes of the Shorthorn breed! There is probably hardly a single pure-bred Shorthorn that is not only descended from *'Favorite'* (252), and not only descended in a single line—but descended in fifty different lines. Take any single animal, and this bull shall occur in a dozen of its preceding generations, and repeatedly up to a hundred times! In the animals of some of the more distant generations. His influence is thus so paramount in the breed that one fancier he has created it, and that the present character of the whole breed is due to the 'accidental' appearance of an animal of extraordinary endowments on the stage in the beginning of the present century. And yet this is not so; he is himself an illustration of the 'breeding in-and-in' system—his sire and dam having been half brother and sister, both got by Foljambe. And this breeding in-and-in has handed down his influence to the present time in an extraordinary degree.

"Take for instance, the cow *'Charmer'*, from which, as will be seen elsewhere, no fewer than 32 descendants are to be sold next Wednesday. She had of course two immediate parents, four progenitors in the second generation, eight in the third, sixteen in the fourth, the number necessarily doubling each step farther back. Of the eight bulls named in the fourth generation from which she is descended one was *'Favorite'*. She is one sixteenth *'Favorite'* therefore on that account. But the cow to which he was then put was also descended from *'Favorite'*, and so are each of the other seven bulls and seven cows which stand on the same level of descent with the gr. gr. dam of *'Charmer'*. And in fact it will be found on examination that in so far as *'Charmer's'* pedigree is known, which it is in some instances to the 16th generation, she is not one-sixteenth only, but nearly nine-sixteenths of pure *'Favorite'* blood. This arises from *'Favorite'* having been used repeatedly on the cows descended from himself.

"In the pedigree of *'Charmer'* we repeatedly meet with *'Comet'*—*'Comet'* was by *'Favorite'*, and his dam *'Young Phoenix'* was also by *'Favorite'*; with *'George'*—*'George'* was by *'Favorite'*, and his dam *'Lady Grace'* was also by *'Favorite'*; with *'Chilton'*—*'Chilton'* was by *'Favorite'*, and his dam was also by *'Favorite'*; with *'Minor'*—*'Minor'*

was by *'Favorite'*, and his dam was also by *'Favorite'*; with *'Peeress'*—she was by *'Favorite'*, and her dam also by *'Favorite'*; with *'Bright Eyes'*—she was by *'Favorite'*, and her dam also by *'Favorite'*; with *'Strawberry'*—she was by *'Favorite'*, and her dam by *'Favorite'*; *'Dandy'*, *'Moss Rose'*, among the cows, and *'North Star'* among the bulls, are also of a similar descent. There is no difficulty therefore in understanding how this name appears repeatedly in any given generation of the pedigree of any given animal of the Shorthorn breed.

"In the case of *'Charmer'* we find of her gr. gr. dams one was the produce of *'Favorite'*. None of her progenitors in the immediately preceding generation were the produce of that bull, but of those in the next and successive generation preceding, there were so far as known 2, 8, 25, 58, 101, 99, respectively got by him. Of course these are not all separate individuals. When cousins marry their offspring counts as great grandmother and father the same individuals twice; and in such intricate combinations as an in-and-in bred Shorthorn exhibits the same individuals occur repeatedly. This does not, however, affect the result—which is, that the blood of *'Favorite'* exists in even greater quantity in individual animals 10 and 12 generations from him than it did in many a calf which he got himself. Of course this tells on the permanence of the character possessed by such animals as *'Charmer'* thus descended, whose produce is to be sold next Wednesday."

The Cattle Sickness in Massachusetts.

The cattle sickness which prevails in Massachusetts has attracted the attention of the Legislature of that State, and a commission has been appointed, with powers to provide for its extirpation, if that be possible.—The commission consists of Paolo Lathrop, of Hadley, Richard S. Fay, of Lyon, and Amasa Walker, of North Brookfield. They have power to destroy all cattle that they may find affected with the disease, to purify the premises where the cattle have been kept, and to take such other means to prevent it from spreading as may be considered necessary.—The cattle destroyed by the commission are to be appraised before they are killed. It is settled that the disease with which the cattle have been affected is what is called the *Pleuro pneumonia*, and its introduction is attributed to the cattle which Mr. Cheney imported from Holland, at a large expense, for the purpose of improving the milk stock. This gentleman has lost very largely by the disease, and the commissioners, after an examination, have nearly destroyed his whole herd. In the latest edition of Flint's work on milk cows and the dairy, there is an appendix which gives a description of this disease, which has been the cause of much loss in Great Britain as well as on the Continent.—The disease is infectious in the highest degree, and was unknown in Great Britain till 1840, when it was introduced by some cattle that were brought from Ireland. It has recently been found that its attacks are less fatal, and much mitigated in all cases where cattle have been inoculated for it at an early stage of the disease. The great trouble has been that the disease may exist for a long time in what is called its first stage before it is noticed, and when it gets into the advanced or second stage, it is very doubtful whether any remedial can prevent it from being fatal; in its third stage it is always past remedy. It is earnestly to be hoped that the efforts of the Massachusetts commissioners may nip this destructive disease thus early after its accidental introduction on this side of the Atlantic, but it will need great watchfulness, if, as is supposed by those who have given it attention, the infectious matter is exhaled from the diseased lungs of the cattle that are affected with it, and thus carried by the atmosphere into the lungs of others, which may or may not be in the same stable or yard. It is with this view of the disease, that the commissioners have been empowered to adopt the more energetic method of eradicating it, by destroying every animal that may be found at all touched with the disease, for while they breathe there is no safeguard from infection by the cattle in the immediate vicinity.

Oats and Peas.

One of the very best mixtures of seed, where oats are grown principally to feed ones own stock, is a bushel of Canadian field peas per acre sown amongst the oats. The peas ripen without diminishing the crop of grain, and make a very great addition to the value of the oats. In fact, those who thus grow oats and peas find that the oats do better, as the pea vines help to shade the ground, and thus to render the soil less susceptible of the effects of dry weather, giving the oats more time to grow and fill out.

Salt Boring in Michigan.

A Communication from Professor A. Winchell, State Geologist.

STATE GEOLOGICAL SURVEY,
UNIVERSITY OF MICHIGAN, ANN ARBOR, FEB. 18, '90.
Dr. POTTER, Superintendent of Saginaw Salt Works:

Dear Sir: My assistant, Dr. Miles, having handed me a transcript of the register kept, of the boring of the salt well, of which I understand you now have the superintendence, I have attentively compared this register with records kept at Grand Rapids, and with my own observations in various parts of the lower peninsula. For the purpose of facilitating this comparison, I have condensed and generalized all the sets of observations. The result is, that I find in all the sets a reasonable degree of correspondence, and am enabled to state, with considerable certainty, what may be expected in your future operations. As these comparisons may possess some interest for you, I take the liberty to communicate them.

I present, first, a list of the rock formations observed by me in the lower peninsula of our State:

- I. CARBONIFEROUS SYSTEM.
 1. Coal measures consisting of—
 - [a] Woodville sandstone, [the "overlying" sandstone].
 - [b] Shales, Coal, Fireclays, Sandstones, Iron stone, &c.
 - [c] Parma Sandstone.
 - [d] Cherty Sandstone [Probably the coal "conglomerate"].
 2. Carboniferous Limestone:
 - [a] Upper [not seen S. of Grand Rapids].
 - [b] Red arenaceous limestone, 5 ft.
 - [c] Lower—Grand Rapids, Bellevue, Parma, Spring Arbor, &c.
 3. Gypsaceous Series—Shales, Clay, Cherty Limestone, Gypsum, Salt.
 4. Napoleon Series, consisting of:
 - [a] Napoleon Sandstone.
 - [b] Striped Sandstone.
 - [c] Iron Stone—not universal—4 in.
- II. DEVONIAN SYSTEM.
 5. Marshall Series—Hillsdale, Jonesville, Marshall, Battle Creek, Holland, Point aux Barques, &c.
 - [a] Marshall Sandstone.
 - [b] Shaly Micaceous Sandstone.
 - [c] Shale Series, abounding in Kidney Iron Ore.
 6. Monroe Limestone.

I next present you with a condensed view of the borings at the State Salt Well near Grand Rapids:

At depth of	Interfering thickness	Thickness of formation	Description of Rocks, &c.
0	0	40	Alluvial, &c. 5-6 ft. clay, then sand and gravel.
40	7	40	"Clay;" Gypsum 6 1/2 ft.
47	1	47	"Very hard, rock, supposed to be hornstone."
48	13	21	"Clay" and "Slate" alternately with 1/2 in. "hard rock" once in 1/2 inches.
61	109	61	"Sand rock," "hard." At 68 ft., spring water brackish, cavity 9 in.; sand rock continuing; softer, with numerous cavities; brine strengthening; rock harder at 104 ft.
170	9	170	"Mixture of Clay and sand—quite hard."
179	5	123	Clay slate.
184	101	184	Hard sand rock, 19 ft.; cavities, water very salt; "soft sandrock" at 204 2/3 ft. "very hard" 245-246; soft 247-278. At 245 feet, brine overflowing profusely and increasing to 254 ft.
285	9	285	"Blue Clay."
287	20	287	"Common Sandrock."
307	24	307	"Ash colored clay and sand rock," "about equal parts."
381	12	159	"Sandrock quite hard."
343	180	180	"Clay rock." Water doubled at 361, and somewhat stronger. From 417-421 very soft like blue clay, then a few black gravel stones—then shale continuing to bottom.
478			"Clay rock" continuing.

The following is the record at Lyons' Salt Well, Grand Rapids:

At depth of	Interfering thickness	Thickness of formation	Description of Rocks.
0	0	13	Limerock, lower 9 feet geodiferous.
14	6	19	"Yellow sandrock," (Probably lower arenaceous beds of the limestone.)
20	2	20	"Blue Clay."
22	0	22	"Coarse reddish sandrock."
27	47	27	Argillaceous beds understratified with gypsaceous deposits.
74	7	74	"Very hard, sharp gritted, bluish sandrock," 76 ft. fresh spring.
81	19	81	"Clay rock," "First indications of salt."
100	79	100	Argillaceous beds sometimes sandy, sometimes gypsaceous.
179	1	179	"Hard sandrock." (These layers are also called "Waterlime.")
180	11	171	Clay rock.
191	109	191	Sandrock, varying from "dark" and "hard" to "white" and "soft" (199 ft.) "dark blue," (216 ft.) "coarse, loose and reddish," (245 ft.) Cavity of 6 in. and great spring of water at 204 2/3 feet.
300	9	118	"Clay rock intermixed with fine particles of sand."
309	66	309	Sandrock, varying between "hard," "coarse," and "loose."
375	14	375	"Clay and sandrock of about equal parts."
389	24	389	"Sandrock, coarse, loose—of about an ash color."
423	13	423	"Clay and sandrock of about equal parts."
485	11	187	"Coarse, loose sandrock;" water doubled and more salt.
446	18	446	"Clay rock."
465	3	465	Sandrock.
467	194	214	Clayrock. One foot of sandrock at 465 ft.
661			Clayrock continuing. Temperature of water in well, 50 1/2 deg. Fah.

Condensed view of the borings at East Saginaw, as kept by Dr. Lathrop:

At depth of	Interfering thickness	Thickness of formation	Description of Rocks, &c.
0	0	92	Alluvial and Diluvial materials. Sal. 1 deg.
92	79	79	Brown sandstone with angular grains. Temp. 47 deg.; Sal. 3 deg.
171	40	171	Shales, first dark, then light.
211	28	211	Sandstone and 3 or 4 ft. Coal. (Highly arenaceous Fire Clay?)

234	13	234	Shales, below, dark, bituminous.
246	18	246	Sandstone with thin seams Coal.
258	38	128	Shales. Temperature 50 deg. Sal. 14 deg. Discharge 80 gal. per min.
294	105	105	White sandstone.
399	65		Limestone, embracing 8 beds of "sandstone," from 6 in. to 2 ft. thickness, (the uppermost bed 5 1/2 ft.) and terminating in an arenaceous limestone with shaly matter.
454	—	68	Shales.
467	20		Sandstone, Sal. 26 deg.
487	29		Shales.
516	48		Shales with intercalated sandstones 6 in. 2 ft. thick. Sal. 44 deg.—60 deg.
556	10		Fine sandstone, blue. Sal. 64 deg. at 568 ft. ["Waterlime?"]
569	15		Dark shales.
584	11		Fine blue sandstone, ["Waterlime?"] 3 1/2 ft. shale at 590 1/2 ft.
595	8		Greyish, coarser sandstone with angular grains.
598	7		Dark shales.
605	10		Sandstone, hard, becoming micaceous—at 610 ft. calcareous.
630	7		Dark shales.
637	6	169	Limestone, hard, brown.
688	14		Fine sandstone, continuing at 647.—Brine nearly saturated.

On inspection of the first of the foregoing tables, you will perceive that the boring commenced in the lower part of the "Gypsaceous Series." It struck the "Napoleon Series" at 61 ft., the "Marshall Series" at 184 ft., and the "Shale Series" at 343 ft., which it penetrated 130 ft.

The boring at Lyons' well commenced in the "Carboniferous Limestone," which was here 19 ft. thick. It struck the "Gypsaceous Series" at 20 feet, the "Napoleon Series" at 191 ft., the "Marshall Series" at 309 ft., the "Shale Series" at 446 ft., and continued in this 214 feet.

The boring at Saginaw, after passing through a great thickness of alluvial and diluvial materials, struck upon the "Woodville Sandstone" at 92 ft., the Shales, &c., of the "Coal Measures" at 171 feet, the "Parma Sandstone" at 294 ft., the "Carboniferous Limestone" at 399 ft., the "Gypsaceous Series" at 464 feet, and the "Napoleon Series" at 633 ft. I consider some of the so-called "sandstones" penetrated between 92 and 294 ft., to be the "Fireclays," which are probably here, as well as at other points in the State, sufficiently arenaceous to be mistaken for sandstones. I should have expected some traces of gypsum between 464 and 633 ft.—the more so because that rock crops out on the Bay shore to the east and north of you.—I may further remark that the lower boundary of the gypsaceous series does not seem to be as well defined here as at Grand Rapids. I hardly know whether to say it terminates at 605 ft. or at 633 ft.

I have also compared these records with those obtained at three other wells in Grand Rapids. The results deduced from the whole may be tabulated as follows:

Table Showing Thickness of Formations at the various Salt Borings of the State.

Formations.	State Well.	Butterworth's.	Lyons.	Saginaw's.	Salt Co's, Saginaw.
Superficial.....	40	0	0	16	92
Woodville Sandstone.....					79
Coal Series.....					128
Parma Sandstone.....					105
Carboniferous Limes.....	27	19	45	44	65
Gypsaceous Series.....	21	119	171	156	99
Napoleon Series.....	133	118	56	1	14
Marshall Series.....	109	187			
Shale Series.....	180	214			
Monroe Limestone.....					

If the deductions contained in the foregoing table are correct, your present position is in the upper part of the "Napoleon Series" of sandstones. Judging from the experience at Grand Rapids, and from my observations on the out-crops of the lower rocks, you will next find 250 to 300 feet of Arenaceous rocks and then over 200 feet of shales. I have some reason for believing that this entire series is somewhat saliferous, but I am not justified in advising you to explore these lower formations, in the hope of any results more favorable than you have already attained.—They have already been twice explored at Grand Rapids, and Mr. Butterworth is now engaged in penetrating to a depth at least equal to that reached by Lucius Lyon. There are copious springs of water at the bottom of the Marshall Series, and also at the bottom of the Napoleon Series, and the admission of this fresh water into your well, might do material detriment to the success which you have already achieved. All of the strong brine anywhere obtained in this State has proceeded from the lower half of the Gypsaceous Series. I his you have now pierced, and have obtained a brine sufficiently concentrated for any purpose. I anticipated that this brine would rise to the surface. I am unable to explain why it rises no higher than it does.—Perhaps the out-crops of the saliferous beds are too low. Perhaps the resistance of these argillaceous strata to the percolation of the water prevents it from obeying with facility the well known laws of hydrostatics. I apprehend, however, you will not discover as strong brine at any point lower than this which will overflow at the top. We must probably content ourselves, in this State, with raising the salt water by pumps. There are, indeed, very few brine wells in our country, where the same necessity does not exist.

I believe that means will be devised, if not already known, for doing this work at little expense; or that should this difficulty not be removed, the superior strength of your brine, the comparative cheapness of fuel, and your location upon navigable waters which stretch many hundred miles in every quarter to the west of your meridian, as well as to the east of it, will enable you to compete profitably with any other source of supply to the Northwestern States.

The foregoing statements may not be necessary for your information, but as this attempt, like any other, to develop the mineral resources of our State, becomes naturally under my cognizance, and excites my interest, I have deemed it sufficiently appropriate to make this communication.

I am very respectfully yours,
A. WINCHELL,
State Geologist

MICHIGAN STOCK REGISTER.

SHORTHORNS.

Numbers with an "s" following them refer to the English Herdbook—all others refer to the American Herdbook, unless otherwise noted.

No. 132—GIPSEY.—Red and white heifer.—Calved January 5, 1886. Bred by the Shakers of Warren county, Ohio, and purchased by J. B. Crippen of Coldwater, Mich.; sold by him to Henry Warner of Dexter, Mich. (See page 426, Vol. III, Am. Herd Book.)
Sire, Locomotive 645.
Dam, a cow by Andes, 215, by Orion, 780, out of Lella by Oliver, 2887 of the English Herd-book.
1 g dam, — by Kentucky, by Cincinnati; he by Berryman 8143, out of Clarkson's Emma, which sold for \$1,350 at his sale.
2 g dam, — by Baron Stenben 3097a.
3 g dam, — by Reformer 2118, by Tecumseh 5409a, out of Mrs. Motte by Adam 717.
4 g dam, — by Mohawk 4492a.
5 g dam, — by Comet 1889e.
6 g dam, a cow bred from the Kentucky importation of 1817.

DEVONS.

No. 42—OXFORD. Calved June 25th, 1889. Bred by J. Ballard & Sons, Niles, Mich.
Sire, Jack Downing 459.
1 g sire, Dibble 176, imported.
2 g sire, Oxford 89.
3 g sire, Forester 46.
Dam, May Flower 1400, by Coke 160.
1 g dam, Rosa 166, by Dibble 176.
2 g dam, Beauty, 1172.
3 g dam, Victoria 1205, by Holkham 217.
No. 43—LINDA. (1875) 3d Vol. Devon Herd Book. Bred by and the property of J. Ballard & Sons, Niles, Mich. Calved Aug. 15th, 1888.
Sire, Jack Downing 459.
1 g sire, Dibble 176.
Dam, Jenny Lind 1842, by Coke 160.
g dam, Crescent 1212, by Splendid 814.

Seed Corn Experiments.

The Republican of Bureau County, Illinois, publishes the following account of some experiments made with corn, for the purpose of testing whether steeping benefited seed or not:

Last year Dr. Chamberlin, of this place, made some practical experiments with chloride of lime, and although he claimed nothing more than the application of a well-known principle, he demonstrated the fact that nearly half the time might be saved in germinating the seed by the use of chloride of lime.

Not satisfied with the success of last year, the doctor is again in the field of experiment. In his office he has four boxes; in the first is corn planted without soaking, and the seed not germinated; in the second, the seed was soaked in warm water, which has just commenced to germinate; in the third is seed soaked in a solution of chloride of lime, and green blades are just peeping from the ground; in the fourth is seed soaked in a solution of chloride of lime and coppers, in equal parts, and the blades are now nearly three inches above the ground. All the seeds were planted at the same time, in the same quality of soil, and taken from the same ear. The boxes have all had an equal share of heat and light, neither allowed any advance over the other.

This experiment should attract the attention of farmers. We conclude from four to six weeks may be saved by the use of chloride of lime and coppers, which is a matter of no ordinary moment when we reflect that a delay in the germination of the seed of two weeks frequently places the crop within the reach of the frost in the fall. Another fact of some importance may also be mentioned: The coppers used in soaking will prevent the birds, squirrels, worms, &c., from eating the seed.

Dr. Chamberlain assures us that one pound of chloride of lime and one pound of coppers, in water, will soak enough seed for twenty acres. The cost will not be over twenty-five cents. Every farmer could afford to make the experiment even if he should fail to derive any benefit from it.

Canadian Oats.

Some samples of Canadian oats which have been introduced into Scotland, and grown there, have been found to improve in weight, so much that a sample shown as a prize weighed fifty pounds to the bushel.

The Garden & Orchard.

Bright on Grape Culture.

"Bright's Single Stem, Dwarf and Renewal System of Grape Culture," is the title of a little volume of 120 pages, by William Bright, of Logan Nursery, Philadelphia. It comes before the public, as the herald of an alleged simplification and improvement of the ordinary modes of pruning and managing a plant, which is rapidly assuming an important position in connexion with the horticulture of our country; and, at a time when a real simplification of the subject, so as to bring it down to the capacities and wants, not of amateurs only, but also of occasional practitioners, is beginning to be much needed.

"The author believes that his system is, beyond all question, the best that can be adopted for grape culture, in America, in all cases. It is, in the main, a method of fruiting the vine on a single short cane with very short lateral branches; growing new wood from the main stem one year, and fruiting it the next; dwarfing the vine by a definite rule of stopping and pruning, and renewing the entire wood of the vine, (except a small portion of the main stem,) every other year." This system the author claims to be equally applicable to both foreign and native grapes, under either pot, grapery, trellis, arbor, or vineyard culture.

In opposition to the practice heretofore so strongly advocated, of deep trenching and enriching, and spicing grape borders with the carcasses of dead animals, the author remarks,—"We also advocate, more strictly and emphatically than any other writer that we know of, shallow and moderately rich borders, very shallow planting, surface manuring and heavy mulching, as necessary to success in grape culture." This is in accordance with the more recent practice of many of our most scientific as well as practical horticulturists; and, as it is based upon the experience of the author, it may be taken as an encouragement of the present tendency to more shallow culture, with surface manuring or topdressing.

Perhaps the most attractive feature of the work is the chapter on the dwarfing and culture of the vine in pots, by which, even within the confines of a city residence, a taste for the culture of this fruit may be gratified, and plants, with their fruits still upon them, may be kept for weeks, or even months, as ornaments to the parlor; while, to the possessor of a small green-house, this system offers the means of growing the foreign grape, in variety and abundance, at a very slight expense.

For cultivation in the vineyard or garden, the author recommends the thorough pulverization of the soil, by giving as many as twelve plowings and harrowings; which, he remarks, "is probably of more consequence than even manuring." He also adds, "We are quite of the opinion that a good old pasture soil, where no trees, grain, or vines have grown for twenty years, is the best of all soils for the grape, and that it cannot be greatly improved, for the growth of the vine, for a year or two, by any sort of manuring whatever." This opinion is greatly in contrast with the more common talk about trenching and enriching three or four feet deep, with a free sprinkling of "dead horses," "guano," "plaster," "super-phosphate," &c.; and, if correct, is, certainly, a godsend to many who have been deterred from planting this fruit, from the labor and expense attending it. Having prepared the ground, the author recommends to plant the vines two feet apart in the row, and grow all the vines alike the first year, pinching them off at the top of the trellis, stopping all laterals, in accordance with specific directions. In autumn, each alternate cane is to be cut back, leaving only alternate ones to fruit the second year, while the others are being reproduced to succeed them; thus fruiting and resting the vines alternately.

With the author's system of surface culture and shallow planting, mulching becomes indispensable. This he proposes to effect by planting drills of the Southern Field Pea, or Cow Pea between the rows, to be cut during the early part of September, when it comes into flower, and turned under as manure.

His objections to the "Ohio German system" of vineyard culture seem to be based on correct principles, and commend themselves to the careful consideration of vineyard planters.

We would, also, call attention to the author's plan for inside, divided, borders for vineries, as well as his method of controlling the temperature and moisture of the roots of vines, by means of what he styles "atmospheric conduction." By means of these devices the roots, as well as the tops are placed under the control of the grower, who is enabled to dry off the border, if desirable, to

secure the early ripening of the wood, while the roots of each plant are confined with their appropriate limits, so that any plant can be replaced or removed, at any time, without danger that it may be robbed by the stronger ones adjacent. The objections urged against locating the border of a forcing house partially or wholly without the building, appear to be unanswerable; while these objections seem to be effectually obviated by the use of the inside, ventilated border recommended.

The subject of special manures for the grape occupies several pages, and, to an observant, thinking man, may furnish valuable food for reflection. Its main object seems, however, to be to set forth the good qualities of the author's special fertilizer: a substance which may be convenient and desirable to those who can have ready access to it, and, who have not the time, or the information necessary to the manufacture of an equivalent.

A short chapter is devoted to Pear Trees on Quince Stocks, in which the author applies to them his principle of moderately deep culture, surface manuring, shallow planting and mulching, as a means of keeping the roots near the surface. Another chapter takes into consideration the merits of the practice of shallow planting in general.

The treatise is obviously the work of a thinking man, who has a thorough, practical acquaintance with his subject, and, whatever may be thought of some of his positions, every man who has a vine to plant, or to manage, will find in it practical information worth many fold the cost of the volume.

T. T. LYON.

Plymouth, April, 28d, 1860.

Soil for Grape Vines.

Wm. Bright, in his late treatise on grape culture, gives the following directions for the planting of grape vines in gardens and small vineyards:

SOIL FOR THE GRAPE.

The best soil for a vineyard is undoubtedly a good sandy loam resting upon a gravelly and but slightly clayey subsoil. If the soil contain a good deal of soft, rotten rock, mica, and especially limestone, so much the better. Soft rock and mica, by their decomposition, furnish potash, or silicate of potash, which, with lime, constitute two of the most important inorganic elements of the grape. A good supply of black, carbonaceous loam, is essential to the soil of a vineyard, and if not present, must be added by sod and peat composts, or plenty of well rotted manure and straw mulching. It is not necessary, under the method of culture recommended in this work, that the soil should be trenched three feet deep, or more, as is advised by some writers. Indeed, if the soil be good, and the subsoil be porous or well drained, we think deep trenching not only unnecessary but positively injurious to the long-continued health and fruitfulness of the vine. If the vineyard be deeply plowed and subsoiled, or otherwise worked, so as to give eighteen inches of good mellow, well pulverized earth, it is all that is required. We do not desire to invite the roots of the grape down into the subsoil. We do not consider it necessary to manure the whole soil heavily before planting a vineyard. It is a waste of valuable material. We prefer to work the manure into the surface of the earth, from year to year, as needed, and thus invite the roots upward into the warm, rich surface soil, instead of downwards into the cold, sterile subsoil.

We do not consider a very rich garden soil by any means the best for the grape. It will cause too luxuriant a growth of wood.—We prefer to apply a top dressing of good well-rotted stable manure, hog manure, or slaughter-house offal, well composted with peat or sod, as a top dressing, in the fall or early spring, before using the special manures recommended in another part of this work. This will enable the vines to perfect a good crop of fruit, or to form the necessary amount of wood, each year, without exciting a late growth of succulent canes, liable to be winter-killed. As to the quantity of stimulating manure required, we will say that it should be about the same as for an acre of wheat, say twenty to fifty horse loads of good, rich, carbonaceous and ammoniacal compost per acre, every year or two; or 300 to 600 pounds of good guano, composted in the same way, or mixed with an equal bulk of plaster, well moistened, a week or two before using it.

The special manures required for a crop of grapes, in the vineyard and in pot culture, will be described in another section of this work.

PREPARATION OF THE SOIL FOR GRAPE VINES.

The thorough preparation of the soil for the grape border, or the vineyard, by plowing, harrowing, rolling, spading, raking, etc., is probably of more consequence than even that of manuring; and by "thorough preparation"

we mean more than the reader, unless he is a skillful cultivator, has any idea of. We mean twelve plowings and harrowings, instead of two. We mean one fall plowing, left rough for winter freezing. We mean the breaking up of all lumps of earth with the spade; the most perfect and minute division of the soil that is possible, so that it shall be left at last, as light as bolted flour. It is in such a soil as this that the grape vine delights—a soil which has been worked over and over, in a partially dry state, a dozen times at least, and allowed to sink into a beautiful consistency by its own gravity, without any pressing or treading. We are quite of the opinion, that a good old pasture soil, where no trees, grain, or vines have grown for twenty years, is the best of all soils for the grape, and that it cannot be greatly improved, for the growth of the vine, for a year or two, by any sort of manuring whatever. In such a soil, the vine grows naturally, luxuriantly and healthfully. It is the best of all soils for a grape border, and only when we come to fruit the vine heavily, do we need manures and fertilizers to sustain it. It is a great mistake to suppose that a grape vine, newly set in a border, must at once be fed with an abundance of rich and stimulating manure. There is no objection to the application of an abundance of well decomposed sod or peat compost, made with one-fourth part of stable manure, and some leaf mold and bones dust. But people do not rightly understand the meaning of the phrase "well decomposed." It requires either the use of powerful chemical agents, or a year or two of time, to render stable manure and peat really "well decomposed." It must be reduced to a state analogous to that of an old garden soil, in which it is impossible to distinguish any of the various ingredients of which it is composed. In this condition, all the vegetable matter is converted into a sort of humus, and all inorganic substances are either in a soluble state, or ready to become so; the acids and alkalies are in a neutral state, or in the shape of harmless salts; moisture is abundant, and ammonia is not wanting. Such preparation of the soil, and such composts, suit the grape vine a great deal better than animal offal and raw bones, which in vine borders we trust have had their day.

Italian Bees.

From the letter written by Samuel Wagner, of York, Pa., to Dr. Kirtland, in reference to the recent bee-keepers' convention, we extract the following words of caution with reference to the above named bees:

To guard as much as possible against disappointment and failure, great care and prudence must be inculcated, and the sanguine expectation of a very rapid multiplication of pure stock, which certain statements and promises, emanating, I think, from the Patent Office, are calculated to foster, should be repressed. The multiplication of pure stock must necessarily be a slow process; and those who really desire the perpetuation of the race, and its ultimate wide diffusion, must resolve to treat the business with the care and circumspection it requires and deserves.—This is important, so that when the Italian bees come to be denounced as a humbug, (as they are sure to be, in consequence of the mismanagement and carelessness of many who will be in haste to procure and increase them,) there may be found reliable persons in all sections of the country, to whom an appeal can be confidently made for the true character and value of the insect. Rapid multiplication, and the disposal of untested queens, will infallibly tend to discredit the stock, and disappoint the expectations of the earnest, as well as the calculations of the sanguine. Those, too, who engage in the culture with the most honest purpose and moderate views, must make up their minds to encounter many unanticipated difficulties, and suffer repeated disappointments. Yet they should persevere, slowly but resolutely. "Festina lente" must be the rule adopted by them, if they would make sure progress, or they will find that in this, as in other affairs, "haste makes waste." Even in the culture of common bees, it is very easy to make calculations of splendid results and large profits—on paper, apparently, too, on good data; but which never were, and never will be realized in practice.

Orchard Houses.

The *Gardener's Chronicle* states, that orchard houses are now to be seen in all directions, since the publication of Mr. Rivers' little manual on their structure and management. The seventh edition of that work has been issued. Vine houses have been made on the principle of these orchard houses, and the sorts recommended are strong growing and good bearers, such as Black Hamburgh, Tentham Black, Black Prince, Chaptal, Chasselas Vibri, Royal Muscadine, Muscat de Sarbelle, Muscat St. Laurent.

The Economy of old Combs in Hives.

Bee-keepers are generally aware, says Mr. Langstroth, that it is a great saving to preserve all the worker brood combs and use them over again which cannot possibly be done excepting in the moveable comb hive.—It is a well ascertained fact, that it takes twenty pounds of honey to make one pound of wax. This will not appear so strange if we bear in mind that wax is an animal oil or fat, and that a pound of honey when digested by the bees, will no more produce a pound of wax, than a pound of hay or corn eaten by an ox would produce a pound of fat. By all means therefore, secure every square inch of comb possible. The manner of using it is to fasten it into the frame, by dipping its edges into hot wax and rosin melted together, or when its size admits, cutting it to the proper shape, and stuffing it in tightly with the fingers. Give the frame thus prepared to a new swarm, and the advantage they will derive will be a saving of the honey it would take to make the comb, also the time they would lose in building them. By this system of management, the weakest and the latest swarms may be built up to become as strong as any in the country.

New Annual Flowering Plants.

In the April number of *Hovey's Magazine*, we find the following list of annuals of recent introduction, which are distinguished for their profusion of showy blossoms commencing in June and continuing uninterruptedly till cold weather. They have been cultivated by the Messrs. Hovey in their collection, and only include those that are new and have a fine ornamental effect in the flower garden:

1. *Callirhoe peacea*.—This is one of the finest annuals, or biennials, yet introduced from Texas. If planted early, in a frame, it flowers well as an annual, but as a biennial it makes a much finer display, often growing from six to eight feet high, and flowering from June till frost. The flowers, which are produced on the terminals of the branches, in long open spikes, are of a bright crimson, with a white eye. The young plants should be well protected through the winter.
2. *Cerinthe gymnantra*.—A curious annual, growing from one to two feet high.—The flowers, which nearly resemble in shape the common Borrage, except much larger, are of a dark brown and yellow, appearing in one-sided, raceme-like clusters, from June till October.
3. *Cerinthe major fl. lutea*.—This is another pretty species, with yellow flowers, and much dwarfier habit. Both are hardy annuals, and should be cultivated in every garden.
4. *Chrysanthemum Burridgianum*.—A beautiful new seedling variety of the old and well known species *C. tricolor*. The flowers are snow white, with a bright crimson circle towards the base of the petals, which is belted with golden yellow. This annual flowers best in cool weather, when the rich crimson contrasts well with the white petals and brown centre. Height, one foot.
5. *Chloris radiata*.—A very curious grass, from the West Indies. The flower stems are from nine to twelve inches high, with flower spikes, radiating from the extremities, like the spokes of a wheel. It is easily cultivated, and forms a neat and compact plant.
6. *Cosmidium Burridgi*.—This is a fine coreopsis-like flower, with orange border, and dark crimson centre. Height from twelve to eighteen inches.
7. *Datura Carthaginensis*.—A new white flowered species of much beauty, growing from three to four feet high. The foliage is much like *D. metel*, but the flowers are larger and more abundant. The time of flowering is from June to September.
8. *Fenzlia dianthiflora*.—A beautiful Californian annual, of very dwarf and compact habit. Flowers, bright rose, with fine dark red spots surrounding a bright orange eye.—This fine annual is well adapted for bedding, and also flowers well when cultivated in pots. The seed is very small, and produced sparingly.
9. *Gymnopsis uniseriata*.—Is an annual, growing from two to three feet high, with yellow ray flowers appearing on the terminals of the branches. It should be planted on the back of the border, as it makes a large plant.
10. *Helichrysum brachyrrhynchum*.—This is a neat little everlasting flower, with a very dwarf and branching habit. The flowers are bright yellow, and continue in blossom all summer.
11. *Ipomoea hederacea superba*.—A fine new hybrid variety, originating between *Ipomoea hederacea* and *I. limbatata*, having the bright blue ground of the former, and the white

border of the latter. It is a very free-flowing variety, and without doubt is the finest hardy annual *Ipomoea* yet introduced.

12. *Lindheimera Texana*.—An annual, from Texas, growing one foot high, with bright yellow, star-shaped, ray flowers. It is a hardy annual, and flowers from June till frost, and well deserving of cultivation.

13. *Lupinus Hartwegii caelestinus*.—A new and beautiful variety of *L. Hartwegii*, of branching habit, and long spikes of large delicate blue flowers, shaded with rose. Height, from one to two feet.

14. *Oenothera bistorta Veitchiana*.—A very ornamental and free-blooming species, from Southern California, of easy cultivation, and trailing branching habit, small foliage, and flowers of a bright yellow, with a dark red spot at the base of each petal. It is a hardy annual, and should be sown in the open ground the first of May.

HORTICULTURAL NOTES.

Sweet Briar for Hedges.

A correspondent of the *Prairie Farmer* recommends the sweetbriar as a hedge plant, that he has found capable of withstanding the winter.

Peach Crop at Cleveland.

The *Ohio Farmer* reports the peach buds around Cleveland all safe as yet, and promising an abundant crop.

Economize Soap Suds.

Now is the time when all soap suds, house slops and all material of that kind should be used about the roots of currants, roses, raspberries, grape vines, and any other fruit trees for which they can be spared.

Sowing Seed.

Recollect that nothing is gained by putting small seed into the ground before it is warm, and has had time to get mellow. Seeds will come up quicker and more satisfactorily to the planter, as a general rule, if sown fifteen days after the 14th of May, than if planted ten days before.

Beets.

At an examination of various new varieties of beets grown in 1859, by a committee of the London Horticultural Society, *Nutting's Dwarf* was pronounced the best for table use. It is described thus: "Leaves nine to twelve inches high, dark blood red; roots chiefly underground 9 and half inches in circumference; flesh dark red, sweet, without the disagreeable earthy flavor of which many kinds of beet partake. Baked, the flesh is deep crimson, of smooth, close texture, remarkably sweet and well flavored." *Short's Pine Apple* was considered the next best.

Flower Cuttings.

A Jersey florist recommends brick dust as the best material in which to propagate cuttings of flowering plants. He says: "My material is brick dust—the refuse of the kiln after burning—or what may be made by taking soft bricks and pounding them up. Enough may be had at any brick yard for a mere trifle, to last a great while—but I think the fresher it is the better. For those plants more difficult to root, such as *Daphnes*, *Heaths*, *Cape Jasmine*, etc., I fill shallow cutting pots entirely with brick dust, (except about an inch at the bottom, which is filled with coarse lumps of brick, to secure a good drainage). For plants that root more easily, I use half brick dust and half sandy loam. It is quite surprising how much more certainly and quickly cuttings of all sorts root in brick dust than in sand or in loamy soil, in the common way.

The Delaware Grape.

The Delaware Grape has been greatly praised and even extolled above other varieties, but the *Rural American*, noticing some of the remarks of Dr. Grant relative to it, says:

"Our Delaware vines fruited last season, for the first time, and we could not distinguish that the grapes were any better than *Dianas* and *Rebecca*, while the *Concord*, when fully ripe, were equal in flavor to either, and twice as large, and yielded double the crop."

The editor of the *Germantown Telegraph* also remarks: "While we may not be prepared to say that the *Concord* is equal to the Delaware, we are prepared fully to declare, that for general cultivation nine persons out of every ten will prefer the former."

The Peach Crop.

A correspondent of the *New Buffalo Independent* who writes very intelligently on the subject, claims that the peach crop in Berrien county, and that section which is most favorable to their growth, is badly used up, and that at most there will be but a small fraction of a full crop. He says:

"From examinations made in February and March last, I came to the conclusion that the peach crop was very seriously injured; but seeing repeated communications in the newspapers of the day, from many and different sections of our State, north of, and more remote from the lake than this, that the peach buds were not injured in the least, but were in a healthy living condition prognosticating an abundant crop of this wholesome and delicious fruit, I was induced to make a re-examination, by which I find my previous opinion too truly verified. If my previous and subsequent examinations had not convinced me of their fallacy (in this section at least), I could have slept cozily, and feasted in anticipation, on the delusive dream of cream and peaches.

On the fourth or fifth of April, I made other examinations with the same result. On the sixth I examined three hundred and fifty peach buds, one hundred and fifteen of which were leaf buds, all in a living condition. The other two hundred and thirty-five were flower buds, out of which two only were living.

If no disastrous event occur after this, we may have a few peaches—not more than 1-117th of our usual quantity, and perhaps not this. And I fear those who anticipate the gratification of feasting on this luscious fruit (this season) will be sadly disappointed."

About the Birds.

A writer in the *Southern Planter* discourses thus pleasantly on the subject of birds and their doings:

There is a class of bird killers—and not a small one—which we should not pass by unnoticed. Grown-up men, who, having suffered prejudice to take the place of close investigation, ignorantly and recklessly destroy most useful birds. The killdeer—most faithful guardian of our turnip patches—charged with eating young turnips; the different kinds of wood-peckers—guardians of our trees—are murdered ruthlessly for making holes in ears of corn, in pursuit of worms, and for feeding their young on cherries. The sweetly-singing thrush is killed for pulling up corn, which the farmer might prevent by soaking, tarring and sulphuring his seed-corn. Ah, but the birds will still pull it up, if they do not eat it. Now, crows, etc., are industrious in gratifying appetite, but, like men, they soon become weary, when they find their work is for nothing. Another sweet songster, the cat-bird, is hated and killed for scolding when his persecutors go near his nest. I have, several times, dissected the gizzards of killdeers—they have no crops or craws—to show their destroyers that they contain no vegetable substance, and nothing indigestible but the little bug so famous for destroying young turnips and tobacco plants. These bugs can be kept out of plant-beds by a perfect fence, three feet high, without a crack. A neat log fence, well daubed with mud, will answer. I never could raise egg plants until I elevated boxes, in which the seed were sown, beyond their reach. They can hop like fleas—crawl with difficulty—and if they ever fly, rarely do it, for, with close watching, I have never seen them perform the exploit. These little hopping beetles are a great nuisance in the land—and I fear are rapidly increasing. The killdeers seem to be their natural enemies, and formerly collected in vast numbers, and now in small ones—if even small ones convenient, may happen to exist—to fulfill the purpose of their mission. I seldom, now-a-days, hear the cheery ring of the killdeer's voice. Let no man, henceforth, kill one, except to convince himself and others that they eat no young turnips. The sacrifice of one producing such conviction may save hundreds of his brethren. The wood-pecker tribe, I look upon as very valuable. The lively, spotted little fellow, who strikingly verifies the adage about giving a dog a bad name, called sapsucker, has often been shot while picking grubs from the rind of some neglected apple-tree, which its owner should have saved by scrubbing the bark well with ley, because his unlucky name seemed to imply that he was sucking out its sap. His handsome compeer, the large, spotted wood-pecker, much tinged with yellow, called lark-woodpecker, and by the boys, yucker—is the only bird I ever saw picking out and eating the worms from the roots of peach trees. Spare him, ye farmers, and teach your boys to spare him! But where is the red-headed woodpecker—the guardian of the olden forests. His occupation's nearly gone. Civilization has almost banished them all, as it did the snow-birds, among the Alleghanies. We have cut down much the greater part of our forest lands. We have ceased girdling trees, in the half-rotten parts of which these birds could peck out holes for their nests. We even search out the old and dead trees for fuel. Where are the poor birds now? Like many of us, seeking homes—from dire necessity—far away. I have known a large community of them actually to arrest the progress of destruction, from the pine-borer, in a forest where one pine tree had been felled convenient to a field of thickly girdled trees in which they dwelt. They are nearly gone now. A solitary lingerer occasionally startles us with his merry squeal, but it excites rather sad associations. This is no longer a home for them. What is called bat fowling, also causes great increase in insects. The number of bull-bats has very much declined in modern times. We thresh wheat so much earlier than formerly, that we can better dispense with the bats, as the summer-weevil, a favorite food with them, annoys us less. Leather-winged bats—ignored by ornithologists—should be prized by farmers. They live, I believe, entirely on insects, and in their destruction of them may substitute birds. But prejudice will not spare even these poor, ugly little flutterers. They are accused of breeding chinchos. Such bugs may get into sycamore-hollows, and their other domicils. But would any man destroy his poultry because chinchos infest his hen-house. This they often do. Bats live, by hundreds, under the barge-boards of my dwelling-house. I know no residence, within ten miles, where mosquitoes are scarcer—and I may say chin-

ches, too, if none will call it bragging)—although there is a curved river boundary, of more than two miles, within half a mile of the house. Pardon this and several other digressions. The whole article is written, mainly, for the good of agriculture, at which these digressions are aimed.

The Great Creator can, by storms and tempests—or, according to His own good pleasure—exterminate all, or any of His creatures. But He has so guarded animals preyed upon, against their marauders, by the law of action and reaction—in other words, of supply and demand—that the latter work against, weaken, or starve themselves, when they approach too near an extinction of the former. A community of cats, feeding only on one of rats, commit indirect suicide on themselves, when they carry on the destruction too rapidly, and must themselves decrease to that point at which the rats and their offspring can sustain them. Well-fed cats—which are much the most valuable—might succeed in effecting their destruction. Nature shields the birds, generally, in this way, from utter extinction. Even man would, probably, relinquish their pursuit, when it ceased to pay in profit or amusement.

The question has not been settled, and probably never will be, whether—on the whole—crows do most good or harm. I will not shrink it, though I confess ignorance and doubt. It seems as if it hardly need be settled, as in our region, in despite of some very keen crow-killers in my knowledge, their numbers, though confessedly prodigiously reduced, are far greater, in proportion to size, than those of any of our other birds. There are two or three animals which, some say, never die a natural death. I think the crow has as fair a title to this distinction as either of them. He has no destroyer but man, and among men there are so few who possess the genuine crow-killing talent, that, I think, with all his cunning in eluding pursuit, and his great prolificness, the danger of his extermination is not very great.

Some people protect crows as very valuable. The late John Randolph would not suffer one of them to be shot on his farm. Indeed, he fed them liberally when his young corn could be injured by them. I tried this once, but they had not faith in me—the black rascals pulled up the corn close by the bait. Probably they prefer it soured or softened in the ground for their young. In that case, by soaking the feed in water a day or two, they might be accommodated. I suspect that even then, from a proclivity to mischief natural to them, they would continue the depredation, in conformity with the boast of the black-bird to the crow, in the old nursery song:

"Every since old Adam was made,
To pull up corn has been our trade."

Some hate crows so much as to put food within their reach, impregnated with a solution of arsenic, and kill them by wholesale. The gentleman mentioned above, declared to me, that he never could bring himself to administer poison to any of God's creatures—not even to rats; that he left arsenic to the doctors, and doubted whether many of them used it to advantage.

There is an insolence and audacity about the crow in the achievement of his thieveries, seeming to defy retribution and challenge assault. Could the warmest apologist for crows—on finding thirty or forty of the best melons in his patch pecked to pieces, while the saucy rogues were chuckling noisily over the feat in the neighboring trees, beyond the reach of gunshot, however—look at the black thieves, without wishing them all dead? If, on the whole, they do more good than harm, it is with a very bad grace, and, like all the good done by scoundrels, with a bad motive. My rule has been, whilst I have by no means loved the crows, to let them alone, except such as took to stealing the eggs and catching the young of my domestic fowls. I have sought the lives of these most sedulously. I would also contend for my melons, savagely, if need be.

As for black-birds, they may readily be cleared out, if they be considered a nuisance, by draining swamps and extirpating willows. Even were they considered valuable, we should not retain the swamps and willows, with all their accompanying evils, for their sakes. Besides, I suspect that they eat but few insects except those peculiar to swamps, whilst at certain seasons they pillage voraciously on all the grain near.

An intimation was made that remedies would be suggested, at least for the palliation of the foregoing evils. Here the writer feels himself much in the condition of a physician, who has great confidence that he could prescribe sanative remedies, but has little hope that the patient will follow the prescription. In the present case, there are too many to be

consulted—nine-tenths of whom will probably pronounce the whole business a humbug; and of the very few who may approve, hardly one will adopt and endeavor to carry out the suggestions. Such are the difficulties to be overcome.

English Cheese Making.

The following is the method described as that practised at one of the large cheese dairies of Somersetshire, England, in making the celebrated Cheddar cheese:

"Cheddar cheese-making differs from that already described, chiefly in the scalding of the curd; which is done by heating a portion of the whey, and letting the curd remain in it for a considerable time, at a temperature even above the natural heat of the milk. The following description of the dairy management of Mr. Harding, at Compton Dando, Somersetshire, is given by the deputation from the Ayrshire Agricultural Society, who visited the farm in 1854. The milk is poured from the pails through a sieve into a receiver outside, from which a pipe conveys it through the wall to the cheese-tub or to the coolers. A canvas bag is also placed over the inside end of the pipe, so that a double precaution is used against impurities entering with the milk.

The rennet is prepared much in the way that it is done in many Ayrshire dairies. Mrs. Harding steepes five vells at once, and this usually suffices for two weeks, in which time about 21 cwt. of cheese may be made. The vells appear to have been carefully cleaned and preserved.

Immediately after the morning milking, the evening and morning milk are put together into the tub. The temperature of the whole is brought to 80 deg. by heating a small quantity of the evening milk. In spring and towards winter a small quantity of annatto is used to improve the color of the cheese. It is put into the milk along with the rennet at seven o'clock. After the rennet is added, an hour is requisite for coagulation. At eight o'clock the curd is partially broken and allowed to subside a few minutes, in order that a small quantity of whey may be drawn off to be heated. This whey is put into a tin vessel and placed in a boiler in an adjoining apartment, to be heated in hot water. The curd is then most carefully and minutely broken, and then as much of the heated whey is mixed with it as suffices to raise it to 80 deg.—the temperature at which the rennet is added. Nothing more is done to it for another hour.

A little after nine o'clock a few pailfuls of whey are drawn off and heated to a higher temperature than at eight o'clock. The curd is then broken as minutely as before, and after this is carefully done, an assistant pours several pailfuls of the heated whey into the mass. During the pouring-in of the whey the stirring with the breakers is actively continued in order to mix the whole regularly, and not to allow any portion of the curd to become overheated. The temperature at this time is raised to 100 deg., as ascertained by the thermometer, and the stirring is continued a considerable time, until the minutely broken pieces of curd acquire a certain degree of consistency. The curd is then left half an hour to subside.

At the expiry of the half hour the curd has settled to the bottom of the tub. Drawing off the whey is the next operation. The greater portion is lifted in a large thin bowl, and poured through a hair sieve into the adjoining coolers. As it runs into the leads it appears to be very pure. When the whey above the mass of curd is thus removed, a spigot is turned at the bottom of the tub, and the remainder is allowed to drain off, which it does very rapidly without any pressure being required. To facilitate this part of the work the tub is made with a convex bottom, and the curd is cut from the sides of the tub and placed on the elevated centre. It is carefully heaped up, and then left for an hour with no other pressure than its own weight. After this interval it is cut across in large slices, turned over once on the centre of the tub, and left in a heap as before for half an hour. The whey drips away towards the side of the tub, and runs off at the spigot; and no pressure being applied, it continues to come away comparatively pure. After undergoing these easy manipulations, and lying untouched during the intervals that have been mentioned, the curd is ripe for the application of pressure. But great care is taken not to put it into the vat to be pressed at too high a temperature. If the heat be above 60 deg., and it usually is higher at this time, the curd is broken a little by the hand and thrown upon a lead cooler, until it is brought down to the desired temperature.

The after-management of the cheese resembles that of Cheshire. A little salt, 1½

lbs. per cwt., or thereabouts, is added to the crumbled curd, and it is mingled and broken by the curd mill. The cheese vats are placed under the machine, and are piled one above the other as the curd falls down. A cloth is put over each vat when the breaking is over the curd is reversed in the cloth, put back into the vat, covered up, and placed in the press for about three quarters of an hour. After this the cheese is taken out, and a cloth wrung out of warm water is put on it. It is again changed at two and at six o'clock, after which dry cloths are put on it. Care is taken that the cheese fills the vat properly. To accomplish this, the vats, at making up, are filled rather full, and the edges of the cheese are pared in the afternoon. Next morning the cheese is rubbed on both sides with salt, and the same cloth is put on again. On the third morning it is treated in a similar manner. The cheese is put into the vat without a cloth on the fourth morning, and a little salt is rubbed over it to keep it from adhering to the wood. After the fourth morning it is reversed in the vat, without a cloth, each morning, until the process is complete, about the sixth or seventh morning.

Treatment of Young Mares.

Willoughby Wood, a writer on horses much esteemed, thus gives his opinion in the *London Field* on the question as to whether young mares are injured for fast work by having colts at an early age:

I have no doubt that the powers of a mare are seriously impaired for fast work after she has had a foal. It may not stop her growth, because a filly, which has been well kept up to three years old, does not usually grow much after that period. It may not greatly detract from their appearance, although it must tend, in a certain degree, to increase that very usual defect of mares, the disproportionate weight of their carcass compared with the power of their legs. But the very fact that it lowers their price in the market is in itself a strong presumption against the expediency of the practice. I imagine that those breeders who resort to it do so either from mistaken views of economy, or only apply it to such mares as they propose to retain for moderate work about home. Without entering at length into the physiology of the subject, it appears to me that one consideration suffices to condemn the practice. The whole art of training a horse for a race, or preparing him for the hunting field or other fast work, consists in bracing his muscular system, and discarding from the frame all superfluous matter. In the breeding animal the very reverse of this is required; our preparation must then be made for that total relaxation of the system which is requisite for the birth of the young animal. When it is considered, moreover, that this state of relaxation is continued for six months longer, or until the foal is weaned, it must be evident that the system can scarcely be expected ever fully to recover its tone after prostration so severe and relaxation so protracted. The case of heifers and ewes feeding well under similar circumstances, to which my correspondent alludes in another part of his letter, is not a parallel one. In these latitudes we do not require our horses to lay on flesh, but to work. That exceptions may occur to the rule that breeding unfits a mare for fast work I do not doubt; but it is never safe to take exceptions for a guide.

As far as my experience goes, its result is quite in accordance with theory. I once had a mare which had bred a foal at four-year-old. In spite of her being well-bred, powerful, with a handsome figure and fine action, she was worthless as a hunter. What made this the more remarkable was that she belonged to a family celebrated for their excellence in this respect. She had no unsoundness, she was a fine goer for a short distance, but was useless in a run, although no fault could be detected in her wind. She appeared utterly to flag after an amount of work which to an ordinary hunter would only have been exercise. She was a hearty feeder, and was capable of standing a good deal of slow work, as, for instance, in harness.

I consider, in short, that to breed from a growing filly is to run the hazard of unfitting her for fast work.

Increase of Cattle.

John Johnston of Geneva on the 3d of December put up three pair of steers to feed, and on the 7th of April weighed them with the following result. 1st pair of steers on the 3d of Dec. weighed 2785 pounds and gained 435 pounds; 2d pair weighed 3060 pounds, gained 585 pounds; 3d pair weighed 2030 pounds and gained 280 pounds. It will be noticed that the smaller the steers when originally put up the less they gained, and this is intended to exemplify what Mr. J. argues, that large steers make more beef out of the same amount of food than small ones; but he has not proved that his steers did consume the same amount of food. They were fed the same weight of meal, but no account was taken of the hay fed to them.

Laying Drain Tiles.

The question is often asked, where is the proper place to commence laying tiles in drains. I think the only proper place to commence laying tiles is near the lower end of the main drain. Construct the outer end of stones, that it may be durable against frost. Commence by imbedding flat stones for the bottom, three or four feet in length; set flat stones edgewise in the form of the letter V, inverted; then join on with tiles, selecting the ends which will match each other, having the ditch sufficiently wide at the bottom that the end of the tile in hand can be varied a little, right or left, so as to make close joints. On arriving at the points intended for side-drains, insert a tile at right angle with the main drain, as described in Co. Gent., present vol. p. 77, making a joint for connection; put a piece of brick at the outer end of the tile to prevent its being filled with earth; drive a stake in the ground directly over the end of the tile, that it may be found when digging the side drain. Use broken straw or stubble for covering the tiles; scatter it in while standing on the edge of the drain, and even it, and press it down with a pitchfork. In filling in the earth, shovel off from the end of the pile, standing between it and the drain and working backwards—which is much easier than shoveling against the end of the pile. When digging the side-drain, leave a section of earth at top where the stake is near the main drain, and dig under to find the connecting tile, and in putting in the tiles join to the connecting tile; and on arriving at the upper end of the side-drain, put a piece of brick to close the end of the tile.

I think the above method preferable to that recommended by Mr. Johnston, which is to commence laying tiles in the upper end of the side drain, and finish it before putting tiles in the main drain—although the main drain is to be dug first. See Co. Gent., 1859, vol. 14, p. 299. The object is said to be to prevent the formation of sediment in the tiles, caused by the rains settling the earth, so that it may pass out, and not through the tiles of the main drain, lest it should be obstructed in its passage and choke the drain; which I think is an unlikely contingency. If drains are mechanically constructed, whether made of tiles or stones, and a straw covering put over the tiles before filling in the earth, for a filter, just as our grandmothers used to put straw in the bottom of the leach, that the ley might be clear, then, whatever earth might settle in, would be carried out by the current of the water.

By commencing at the lower end of the drain, in laying tiles, the inclination of the drain will help to close them together; and by finishing the main drain before the lateral drains are commenced, the earth does not accumulate on the surface at the intersections of the drains so as to be in the way of the operator; also by commencing to lay tiles at the lower end of a side drain instead of at the upper end, it is unnecessary to cut a tile—always a difficult thing to do successfully—as it matters not, at the upper end, whether the tiling comes out half a length longer or shorter than was originally designed.

The leaving the earth thrown out upon the side of the main drain for an indefinite period, waiting for rain to settle the earth and wash the side drain tiles, is rather slipshod; whereas, when filled in the same day it is dug out, it is not more than two-thirds the labor as when delayed one week.—*Amos Fish in Country Gentleman.*

Eleven Years of Corn in Illinois.

G. W. Smith of Rockford, Illinois, gives his experience with corn for eleven years and its cost, as follows:

Soil is clay loam and bottom land. Uses the double shovel plow in cultivating, and sometimes the hand hoe. Works his corn four times, keeping it clear of weeds and foul stuff. Regards Yellow Dent as the best variety. Plants four feet each way, and four grains in a hill. Selects seed corn before the first frost, and preserves it in a dry place. Selects the ripest ears; prepares his seed by washing in brine; the bad seed rises to the top. The following is Mr. Smith's statement of the corn raised by him since 1848:

	Av. bush. per acre
1849 Planted on spring wheat stub, plowed in spring, 50	50
1850 Planted on spring wheat stub, plowed in spring, 40	40
1851 Planted on oat stubble plowed in spring, 50	50
1852 Winter wheat ground plowed in spring, followed the year previous, and clean, 60	60
1853 After corn, 50	50
1854 Winter wheat stubble well followed, 60	60
1855 Winter wheat ground, well followed, bad season, 40	40
1856 Fall plowing, seed failed, 35	35
1857 Fall plowing, bad planting, 40	40
1858 Winter wheat stubble, wet season, 40	40
1859 Spring wheat stubble, dry season, 30	30
Average yield for eleven years, 44	44

He gives the following as the cost of raising an acre of corn:

Plowing, seed, and planting, 50	\$1 00
Plowing and cultivating four times, 1 25	1 25
Husking and housing, 1 75	1 75
Interest at 10 per cent., on land at \$80 per acre, 3 00	3 00
Taxes, and wear of tools, 70	70
Shelling and marketing, 1 00	1 00
Total, 8 75	8 75
Average 44 bush. at 50 cents, \$22 00	22 00
Value of fodder per acre, 1 50	1 50
Net profit, \$13 95	13 95

NEW ADVERTISEMENTS.

M. SHOEMAKER, Jackson....Durham Bull for sale.
H. B. THOMPSON, Hartford, O., Assignee's sale of Stock.
M. S. D., M. & T. RAILROAD, New Time Table.

FARM FOR SALE.—The owner of a magnificent farm of 210 acres, located in Macomb county, a few miles from Rochester, in this State, is desirous of selling it. The farm itself has a fine large dwelling, horse barn, large barn sheds, carriage house, piggery, orchard, and garden. It is all cleared but about 80 acres, which is in wood; is well fenced, and under first rate cultivation. With the farm will be sold the stock and implements, which are all in good order, and comprise cattle, sheep and horses, together with the wagons, &c. used upon such an estate. The terms will be made easy.

For further particulars apply to R. F. JOHNSTONE, Editor of the Michigan Farmer. 17-4f

MICHIGAN FARMER.

R. F. JOHNSTONE, EDITOR.

SATURDAY, APRIL 28, 1860.

Editorial Miscellany

A trial of plows, harrows and cultivators is to be held at Capt. Gardner's farm, in Northville, on Saturday, May 5th, to test the work of Bucklin's improved harrow.

To those who want a first rate farm, with all the appurtenances, buildings, orchard, fences, and a soil as rich as any in Michigan, together with a good stock of cattle, sheep and horses, and all the implements, we commend the notice at the head of this column.

It will be seen that R. L. Howard, of Buffalo, offers Mowers and Reapers on the improved Ketchum principle at rates very low. In his advertisement last week, a misprint made it appear that he offered a four horse machine for sale when it should have been a two horse.

A meeting was held last week at St. Joseph in Berrien County, to take measures to form an agricultural society for the northern towns in that county. A committee has been appointed to make inquiries as to what towns will second the movement, and which is to report on the 28th instant.

The Annual Fair of the State Society of Illinois is to be held at Jacksonville, and will begin on the 10th of September, and close on the 15th. Amongst the premiums to be offered is one of one thousand dollars for the best steam plow. This ought to call out results of the inventive genius of the year.

We publish the report of Professor Winchell, the State Geologist, on the salt wells at Saginaw. This report is highly interesting and of use to those who are giving attention to the mineral resources of which Michigan is possessed. Nothing can better illustrate the utility of the early publication of such reports than the fact that Mr. L. H. Parsons, of Corunna, has already deduced, that the salt strata may be reached in some portions of Shiawassee with nearly 200 feet less boring than has been found necessary at Saginaw.

Read what a useful series of experiments the Farmers' Club of Plymouth have instituted relative to the cultivation of the potato. There is no reason why other parties may not also unite with them, and try the same series of experiments in different parts of the State, and on soils that differ from those in Wayne County. There is certainly much to be learned relative to this very common esculent. In the first place, the maximum of production is hardly settled yet. No one can say how many potatoes he can raise per acre. The amount varies from fifty bushels to five hundred. All concede that crops of this plant are light, compared to what they ought to be, but whether the deficit is caused by the method of cultivation or the want of method, by the seed, or by other causes, does not seem very well determined. This attempt of the Plymouth club is a move in the right direction, and we hope to hear of more such movements.

By a letter received from A. C. Fisk, of Coldwater, we learn that "Warfield," of which he gave a burlesque description in a letter which we published as the advertisement of a Jack, in last week's issue, does not belong to the long eared tribe, and that the writer has not gone into the mule breeding business. On the contrary "Warfield" is a very fine two-year-old thoroughbred purchased from R. A. Alexander, of Kentucky, bred from imported Sovereign, and out of Isola by Bertrand, by Sir Archy. The full pedigree of this horse has been received and will be published next week. Mr. Fisk has gone to the very best source to procure the highest bred horse for the improvement of stock that he could find, and having been for many years in the business of breeding horses, there are few that ought to be better posted in regard to what is wanted to improve the stock of this

State. He knows the deficiencies under which much of our stock labors for want of size, style and action combined, and he is well aware that this is only to be remedied by trying to infuse more of the properly selected thoroughbred into the mares from which stock is to be raised. He knows well that where the mares possess size, they are generally coarse, and lack in both style and action, and where they possess action, they are as a general rule inclined to be diminutive. The introduction of such horses as Warfield, considered in this view, alone, may be considered a very great public benefit and we hope the efforts of the owner may be duly appreciated.

The managers of the Baltimore and Ohio Railroad have paid a very liberal compliment to the Western press and its conductors, by sending to the editorial fraternity an invitation to visit Baltimore, Washington, and Mt. Vernon, at any time between the fifteenth of April and the fifteenth of June, but more especially to join in the excursion for which a special train is to be provided to start from Wheeling on the 4th of May. To render this excursion still more complimentary, at the instance of the managers, nearly all the western railroad companies have joined in aiding the Baltimore and Ohio Railroad officers to carry out the design, and have likewise granted to the recipients of the invitation tickets the privilege of passing over their roads free at any time during the period specified. Amongst these roads we note that R. N. RICE, Esq., of the Michigan Central, with the usual courtesy to the press which has always distinguished him, has connected that road with the Baltimore and Ohio for the occasion. The Baltimore and Ohio Railroad passes through the States of Virginia, and Maryland, and across the Alleghenies, and probably the most picturesque region in the United States, and as the visit to Washington and Mt. Vernon will, of itself, be an oasis in the life of many of the members of the press, we have no doubt the opportunity will be seized upon as a happy chance not only to see much of the other States, but also of becoming personally acquainted with many of their professional brethren, and of enjoying together the sights and scenes to be found at Washington and Washington's home.

The Wheat Prospects in Ionia.

A correspondent from Lyons writes to us as follows:

The wheat has come through the winter looking finely in the Valley, and should there be no mishap there will be a large crop of the finest quality of wheat produced in the Grand River country, as this part of the State has a reputation of producing a very superior quality of wheat. There has been a large crop of maple sugar of excellent quality already harvested, the warm, dry weather of March being a real Godsend to the sugar makers, as they were not compelled to boil down rainwater, or wade through mud. The early spring makes feed of all kinds plenty at reduced rates. Corn that was selling in January at 75 cents can now be purchased for 50 cents; other things in proportion. It is claimed by some of the weather and season prophets that this is to be a season of great abundance in these parts. May their prognostications be correct for once.

We have a very fine water power now completed at this place, and our mills upon it are in full blast, with sufficient power uncoupled for 30 run of stone. The dam that was put across the run at this point last fall puts a veto upon the fluky tribe going any further up Grand River, and the consequence is, we have the finest fishing grounds in the State, large quantities of fish having been taken from the river daily for a month past. I have counted thirty men and young Americans engaged in the sport at a time. If you wish to breakfast on the finest pickerel, come to Lyons, Ionia county, Mich., and call on

H. E. D. G.

The Wheat Crop.

The Western Chronicle states that the wheat crop never looked better than it now does in St. Joseph county. It promises a very full crop.

The Owosso American says the wheat in Shiawassee county, we are glad to hear from all observers, has wintered most excellently, and its present appearance is unusually promising.

A correspondent of the Ann Arbor News writes—"On leaving home last Thursday, by the Central Road, for the West, I was much surprised to see the beauty of the wheat. In only one or two fields between our city and Michigan City did I observe any to have been killed by freezing out or by water standing upon it. I never saw the wheat look so finely as this spring, and the people seem to be much rejoiced in the prospect."

Political Notes of the Week.

—During the week we have had so far nothing but rumors, reports, telegraphic flashes of remarkable smiles, bows, winks and portentous nods from those who figure in the great convention at Charleston. On Monday that body met, and commenced operations by a difference of opinion over the merits of the delegates claiming to represent New York and Illinois; the New York disputants being headed by Fernando Wood, and the Illinois men by Ike Cook. The attempt of their friends to procure them entrance, however, only resulted in showing that these parties had but a small minority in their favor, 44 votes to 259 being all they could muster on two test trials. The convention contains 606 members, but has only 308 votes, each State being represented by twice the number of its members and Senators in Congress; the States giving their votes by the proportion of that representation, Michigan has six votes. W. B. Flournoy of Arkansas was nominated for temporary chairman by the chairman of the national committee, and Wm. F. Ritchie of Virginia, Secretary. The convention on Tuesday elected Caleb Cushing of Massachusetts, President of the convention, with a vice-president and secretary from each of the States, and adopted a rule that unless instructed otherwise by the State conventions that nominated them, each delegate should have the right to report his individual vote as he pleased. The vote on this point was considered as indicating a favorable result for the friends of Mr. Douglas. There was apparently, judging from the reports, considerable unanimity in these preliminary proceedings. On Wednesday the convention agreed to admit from Illinois the delegates in favor of Mr. Douglas, and had come to the conclusion to admit the delegation from New York headed by Dean Richmond, which in fact excluded the Wood delegation. The committee on a platform had also, by a majority of one, decided not to re-adopt the Cincinnati platform as that which should be elected as the exposition of the principles of the party. The chairman of the Vermont delegation died of apoplexy during the day. A rule was adopted limiting debate on all questions except the platform to fifteen minutes for each speaker, and one hour to each speaker on the discussion of the platform. It is evident from the brief telegraph dispatches that there has been warm speaking, but at the same time nothing that may be considered important, indicating a want of cordiality amongst the members. Up to this date it is impossible for even the most enthusiastic friend of any candidate to say who will be the nominee, though we should decide that the chances are altogether in favor of Mr. Douglas; but the platform seems as yet to point out a rock which may make or mar the chances of any candidate.

The convention had not on Thursday made any step towards the nominations, and from the dispatches received up to now, it does not seem likely that the business of nominations will be got through with during this week. There are all kinds of propositions on the subject of the platform, and all kinds of reports; but it is very evident that a platform will have to be made before any nomination will be attempted, and then it is impossible to say how many ballots may be necessary before a conclusion is arrived at. As for the nominations themselves, about which nothing has yet been done officially by the convention, it is very uncertain who will be nominated. For the first two days the friends of Mr. Douglas interpreted every movement as tending to advance his interests, but this tone has been somewhat checked, and it is easy to be seen that they are not by any means so confident that the adoption of his name is a fixed fact. At the same time there is as little to be said for any other name. D. S. Dickinson of New York, seems to be stronger at the present moment than he was when the convention opened. The reports indicate great excitement on the part of the members from Southern States and a determination that the platform shall contain a distinct acknowledgement of the duty of Congress to protect negro slavery wherever it may appear within the jurisdiction of the United States. This of course is not looked upon as wise policy, by the delegates from the free States, and how long the struggle may last is not known, but it will not be considered very wise by the leaders of the party to protract it.

All sorts of rumors are of course prevalent as to the nominations to be made at Chicago, and we give the following from the Chicago Democrat for what it is worth:

"A strong movement is on foot at Washington to head off the Seward and Lincoln movement by the names of McLean and Trumbull, or Bates and Fessenden. This will produce an alliance between Seward, Chase and Cameron, and unite the three great States. If so, then Seward and Lincoln are safe, as Gov. Banks prefers Seward to McLean or Bates. Gov. Banks is also a warm friend of Mr. Lincoln."

For our own part we think there can be little question that Mr. Seward will get the nomination as the candidate of the republicans, and as little that it will be decidedly a most politic move to place a man like Mr. Lincoln, from the great northwest, on the ticket. Had Illinois been favored at the convention of 1856, there is no saying now who would have been president for that term. All movements of the political councils at Washington are to be regarded as dictated more by cowardly fear than any regard for principle.

In Congress there has hardly been a quorum for the week, and so far as we note the members have confined themselves to the delivery of political speeches. No business of importance has been done or is likely to be done before the 1st of June. The Hon. Mr. Chandler, Senator from this State has made a visit northwards and is at present in Detroit. Still we note that 180 members are present in Washington. The most remarkable proceeding during the week has been the delivery of a speech by Mr. Corwin of Ohio, which of course made every one who listened to it good natured.

The law in this State makes it necessary that all those residents of foreign birth who desire to vote at the Presidential election shall declare their intentions six months previous to that event, and we note that preparations are already being made to secure that all such persons shall make such declaration. After the declaration, there will be a good time among the working politi-

cians, watching these new made citizens, that they don't undergo turns of political regeneration.

—The correspondence of Ex-Governor Robert J. Walker with President Buchanan is being published, having been elicited by the questions of the Corvode committee; it is creating considerable excitement, and there has been a report that the Ex-Governor had sent a challenge to Attorney General Black, which the latter very properly declines.

—It is proposed that the United States shall buy out the Mormons. Should this mode of getting rid of them be adopted, it is altogether probable that the Mormons would take up their residence in one of the northern Mexican provinces, or perhaps fillbustler in Nicaragua.

—The reception and care of the Japan Embassy has been put in charge of Captain Dupont of the Navy, at Washington. The Japanese are to be received at New York first, and proceed thence to Washington.

—Governor Wise of Virginia has sent a letter to the Charleston convention withdrawing his name as a candidate for the nomination.

—A convention to form a provisional government for Arizona has been held in that territory. L. S. Owings of Mesilla was selected for Governor.

—It is said that Miramon has sent a very bitter letter to General Cava relative to the capture of his steamers.

—A bill has been introduced into the Assembly of Alabama for transporting all negroes guilty of capital offences to Massachusetts.

—Nothing has yet been done relative to the disposal of the two captured steamers.

General News.

—A company of about forty persons from Macomb and other counties started for Pike's Peak last week.

—The Governor of New York does not approve of the bill for the erection of a new City Hall in New York.

—Navigation was declared open between Detroit and Buffalo last Monday.

—Two horses have been attacked with hydrophobia near the city of Detroit on the Fort Gratiot Road.

—Judge Young, formerly Commissioner of Patents, has become insane.

—The Hon. B. V. French of Brimley, long known as a noted agriculturist, died of dropsy last week.

—A piece of road in Concord, Massachusetts, which has been in use for five years, lately sunk out of sight.

—Three inches of snow fell at Oswego, N. Y., on the 25th inst.

—One hundred and fifty buildings were destroyed by fire in Woodstock, in New Brunswick.

—The newspaper express train on the Hudson River Railroad is reported to have run seven miles in six minutes!

—A man named George Mizner has been sentenced to labor for life for an atrocious outrage on a girl near Hillsdale.

—It is estimated that there are 7,500 Indians in Michigan. They belong to five different tribes, and speak as many distinct languages.

—The bids for carrying the mails in the Middle States, for the next four years have been let at less rate than have heretofore been paid.

—A deputy United States Marshall was shot at Topeka while endeavoring to arrest a citizen named Ritchie on charge of robbing the post office.

—The Duchess of Leeds, one of the grand-daughters of James Carroll of Carrollton, has subscribed one thousand pounds sterling to aid the Pope.

—In a quarter race at Owosso, the mare Fanny Booker beat her opponent, known as the Brown horse, winning \$250.

—The oil wells in Pennsylvania are increasing in richness. A well known as the Crosby, yields 2,475 gallons daily.

—The Ann Arbor Local News says that coarse grains, clover seed, potatoes, butter and eggs are lower than known to be for ten years in that city.

—J. H. Parsons suggests that salt borings may be made in Shiawassee county that will afford brine at nearly 200 feet less depth than the wells at Saginaw.

—A run was stated to have been made on the branch office at Toledo of the Tecumseh Bank, which has caused the bills to be refused by the brokers in other places.

—The New York canal board is about to institute a suit against the New York Central Railroad for the collection of canal tolls, claiming that the law abolishing them was unconstitutional.

—The Arctic expedition of Dr. Hayes in search of the Polar Sea, is attracting attention in England, and should it not start, it is thought one will be fitted out in that country.

—The work of completing the Great Eastern is being pushed forward with considerable vigor, and it is supposed she will be ready to cross the Atlantic by the end of May.

—The prize fighter Heenan was arrested in Nottinghamshire and held to local bail. Warrants were issued for Sayers, but the local magistrate to whom the officers went would not permit them to be served.

—At the annual election of the Michigan Southern R. R. Company, Elisha M. Gilbert of Utica, N. Y., was elected President, Geo. Bliss retiring. The Hon. John S. Barry of Constantine represents the Michigan interest on the Board of Directors.

—The President of the State Military Board has issued a call for a convention of the board to meet at the Russell House in Detroit, on the 14th of May, to make arrangements for the year's encampments, inspections, &c.

—The large railroad passage boat constructed for the purpose of being propelled across the St. Clair river at Port Huron, by the force of the current, has proved a failure. The current don't operate on any such heavy craft.

—The news from the California mines seems encouraging. Late advices say, "Mining operations are retarded by the weather. Had the season been favorable, not less than 15,000 persons would be at work in the Washoe mines, but as it is there are only about 8,000."

—The mining prospects are encouraging. The original lead increases in richness as it continues to be opened, and new ones of determined value are being discovered every few days. The probabilities are that we shall have a population of 40,000 on the eastern slope before the first of January next."

—The postage between the United States and the German and Austrian postal union is now uniform at 15 cts. on a half ounce letter, prepayment optional.

—A very destructive fire occurred at Grand Rapids on the night of the 15th. The burnt district comprises nearly an acre, many of the losers are insured.

—A fire has also swept off a large portion of the business district of St. Johns, destroying the printing office and a number of stores and dwellings.

—The Marshal has appointed his assistants to take the census in Detroit and Wayne county. John H. Harman is one of them.

—John A. Dix has been offered the post of commissioner under the Paraguay treaty.

DURHAM BULL FOR SALE.

I WILL SELL my thoroughbred Durham Bull

"PRINCE EDWARD."

as I have used him with my own herd so long as I can do so without breeding too close. Those desiring to purchase are requested to call and see him and his stock, which I have, from calves to four years old, and which will equal anything in the State. I will sell this Bull very low for cash or approved paper, at six months.

Pedigree of Prince Edward.

See American Herd Book, Vol. 2, p. 265. Red and white, bred by Ambrose Stevens, sold by him to Edward Belknap, and now the property of M. Shoemaker, of Jackson, Michigan. Calved 1853; got by Wolviston, (1108) out of Princess 1st, by Napier (6285); Rose Ann, by Bellerophon (3119); Rosette, by Belvidere (1706); Red Rose, by Wat-rloo (2816); Moss Rose, by Baron (28) Angellina, by Phenomenon (491); Ann Boleyn, by Favorite (385); Princess, by Favorite (385); Bright Eyes (bred by Alexander Hall), by Hubback (319); Bright Eyes, by Snowden's Bull (612); Beauty, by Masterman's Bull (429); Dutchess of Athol, by Harrison's Bull (292); Tripes, (bred by C. Pickering) by the Studly Bull (626); bred by Mr. Stevenson of Kettton, in 1789.

Jackson, March 12, 1860.

M. SHOEMAKER. 17-4f

ASSIGNEE'S SALE OF SHORTHORNS, &C.

THE ENTIRE STOCK OF SETH A. BUSHNELL, Breeder of

Shorthorn Cattle, Jacks and Jennets, South-down Sheep, and Chester White Pigs,

must be closed out during the coming summer.

A portion of the Cows and Heifers, and the entire stock of sixteen Bulls, (with the exception of Fanny Boy), will be sold at PUBLIC AUCTION, to the highest bidder, on

Thursday, the 31st day of May next, at the residence of the said Bushnell in Hartford, Trumbull county, O. At the head of this stock, and to be sold with the rest, stands the famous

PRIZE BULL HUBBACK.

The balance of the stock will be held subject to private sale at any time. Terms of sale, seven months credit with approved security, or six per cent off for cash.

HOMER R. THOMPSON, Assignee of Seth A. Bushnell. Hartford, O., April 21, 1860. 17-2*

ATTENTION FARMERS!

From the Unparalleled Success of the

KETCHUM MACHINE

the past season, I am induced to build for the harvest of 1860

A Larger Number than Usual, and I offer them as the MOST PERFECT MACHINE I have ever manufactured, and at prices to correspond with the times.

HOWARD'S NEW TWO HORSE MOWER, all iron—light draft—no side draft—no driving fast to have them work well—no clogging. Price only \$100 in Buffalo.

HOWARD'S NEW ONE HORSE MOWER, s of easy draft, for one horse and capable of cutting six to eight acres of any kind of grass per day. Price \$75 in Buffalo.

WOOD FRAME, TWO HORSE MOWER; price \$80 in Buffalo.

COMBINED MOWER AND REAPER, (iron) with late improvements—took first premium at the UNITED STATES FAIR at Chicago last fall. Price \$130 in Buffalo.

All the above machines have Emery's Adjustable Lever and Roller, and several other improvements, and are warranted.

Send for a pamphlet. Address R. L. HOWARD, 16-8t Buffalo, N. Y.

NANSEMOND SWEET POTATOES.

THE undersigned being permanently located and engaged in the cultivation of the Lebanon Yellow, or Nansmond variety of Sweet Potatoes, offers Plants to the public at the following LOW PRICES:

400 for \$1.00, 1,000 for \$2.00, 10,000 for \$15.00.

Plants boxed so as to keep good for one to two weeks. Send in your orders in time. Plants ready by May 1.

Address R. SNELL, Foster's Crossings, O.

P. S. All Plants sent by express unless otherwise ordered.

These plants can be obtained and are for sale at PENFIELD'S Implement and Seed Store, Detroit, April 9, 1860. 15-5t

Reaping and Mowing Machines.

JOHN REILLY,.....WM. M. ELLIOTT.

REILLY & ELLIOTT,

MANUFACTURERS OF

REILLY'S BADGER STATE

Reaping & Mowing Machine.

JOHN REILLY, PATENTEE.

They also manufacture

Steam Engines, Mill Gearing, Plows, and

all kinds of Castings.

WHITE PIGEON, MICHIGAN.

THIS REAPER AND MOWER took the First Premium at the United States Fair in Chicago last fall; also, at the Wisconsin State Fair in Milwaukee.

White Pigeon, St. Joseph co., Mich., April 9, 1860. 15-6m

Seeds of true Hubbard Squash, 40 seeds for 12 cents in stamps.

Raspberries—Brinkley's Orange, Allen's, Fastoff, Antwerp, Belle de Fontenay, and others.

Currants—all the best, both old and new—Cherry, Red and White Dutch, White and Red Grape, Versaille, Glorie des Eglons, &c.

Grape Vines—Isabella's, Catawba, Concord, Delaware, Rebecca, Hartford Proflide, Union Village, Logan, Canadian Chief, Marion, Diana, Anna, &c., together with a very large stock of Foreign vines for cultivation under glass.

Ornamental Trees and Shrubs, in great variety.—Particular attention is called to our extensive collection of Roses, Dahlias and Verbenas, embracing the best in cultivation.

In addition to the large stock on hand, nine cases have just been received from France per Steamer Australian, with many of the novelties of Europe.

WM. ADAIR, Detroit, Mich. 14-8w

TOLEDO WHOLESALE NURSERIES.

A. FAHNESTOCK & SONS,

OFFER to the trade generally and to all persons wishing to purchase in large or small quantities, at the lowest rates per dozen, hundred or thousand.

Our stock comprises, Apples, Pears, dwarf and stand, Plums, Cherries, dwarf and stand, Peaches, Apricots, Nectarines, &c., as well as Lawton Blackberries, Strawberries, Raspberries, Gooseberries, Grape vines, Currants, &c.

Taking transportation and season into consideration, we sell lower than almost any eastern nursery. Our stock of Ornamental Trees, Evergreens, Shrubbery and Greenhouse plants is the largest west of Rochester, N. Y.

Orders solicited. A. FAHNESTOCK & SONS, Toledo, Ohio. 8-9wecw

Send stamp and get a catalogue.

The Household.

"She looketh well to the ways of her household, and eateth not the bread of idleness."—PROVERBS.

EDITED BY MRS. L. B. ADAMS.

RUFFLES.

BY RUSTIE NELL.

Oh the ruffles! Oh the ruffles!
There's nothing now for us ladies to do
But to ruffle ourselves from bonnet to shoe,
A ruffle here and a ruffle there,
For only ruffles are fit to wear.
Now finished, alas, is embroidery's reign,
The skirts that were wrought with such trouble and pain
Must now be remodeled and wrought again,
With tapes and ruffles a lengthy chain,
Till they're all a mass of ruffles!

Oh the ruffles, they're troublesome all!
The ruffled pillows, the ruffled sheets,
The ruffled cushions, the ruffled seats,
The ruffled skirts, and shirts and things,
The caps and gowns, and night-cap strings,
The ruffled tempers, and ruffled hearts,
So sorely ruffled by Cupid's darts,
God save us all from these ruffling arts;
For we're ruffled in pieces and ruffled in parts
Till our brows and noses are ruffled!

Oh the ruffles, the sinful ruffles!
The preacher says that the church will fall,
And he rouses us all with a stirring call,
To come up and work for the love of souls,
And teach the heathen who dwell at the poles.
How 'tis wicked to feed on the oil of seals,
While Christian people eat cod and eels!
Now coaxes and scolds and praises and blames,
And calls on the damsels and also the dames
To leave their pride and their ruffles!

Oh the ruffles, the blinding ruffles!
Here's Mistress This, and Madame That,
With the musical tones of a straining cat,
Preaching of woman's fearful wrongs,
How she's bound to the dishcloth, the broom and
tongs,
Her genius so fettered in wing and tail
Can never fly till a coat of mail
Shall take the place of costly wings!
But alas the mass of foolish things
Care only for loves of ruffles!

Oh the ruffles, the traitor ruffles!
Alas for our country, wrong or right!
Alas for the heathen who sit in night!
For priest and prophet have called too late—
We are bound by the hands of a cruel fate!
We have dressed in ruffles our sickly souls
And what care we for the church or polls!
My patience is ruffled by every call,
For I know on what careless ears they fall—
On ears that are stuffed with ruffles!

Oh the ruffles, the witching ruffles!
The men are wedded to ruffles now,
To ruffles and founces and hoops they bow,
'Tis all for ruffles they pine and sigh,
But bless my soul, what a line and cry,
They make about woman's pride of dress,
When if they should wear one ruffle less,
They'd call them dowds and elphish things,
And turn in their hearts after ruffled wings!
Oh the men are crazy with ruffles!

Oh the ruffles! the warlike ruffles!
For priest and prophet, czar and king,
Greek, Turk, and Roman, a mighty string,
Swiss, Gaul and Briton, and Dane and Fin,
Of every nation and kith and kin,
A Didio here and a Philip there,
A Bruce and Brutus (a noble pair),
Have ruffled the world for an empty name,
Like the cross and crescent of haughty Spain,
With the spear-bought, blood-stained ruffles!

The ruffles! Ah me, the ruffles!
When will the days of ruffles end,
And man to man be ever a friend?
When shall Love fetter the wings of Hate,
And Peace at smiling o'er church and state?
When the circle of time shall be complete,
When the dawn and eve of creation meet,
When the earth renewed by a newborn light
Shall be clothed in garments fresh and bright,
We shall see the last of the ruffles!

Editorially Speaking.

A new contributor, Rustie Nell, is welcomed to the Household this week. Sing again for us, Nelly; there seems to be very few singers in our family who can rattle off the notes in the easy, dashing style that you do. Let us hear your voice often, only do not touch on political matters, or we shall be obliged to "expunge." You will perceive we have exercised our prerogative already.

In reply to the strictures on "Slow Jamie" sent us by a friend, we would say that we have not thought it necessary to make any comments on his way of treating the noted characters of the Bible, for the simple reason that it was considered what he said was only one man's opinion on matters which are liable to different interpretations by every one, and which are, in reality, of no vital consequence to any one. It is not to be supposed that no article is ever admitted into a newspaper that does not exactly correspond with the ideas of its editor. Slow Jamie and Mr. Stunner and Mr. John Farmer differ with us in many points, yet we are willing they should have a chance to express their views, believing they will work nothing immoral or pernicious among our readers. Slow Jamie's idea of keeping Noah in the ark so long after the flood was over, in order that he might not get the chill fever by coming out on the damp ground, was quite novel to us, yet it is a very sensible idea, and shows the practical light in which the writer is in the habit of viewing things. Some people may take exceptions to that, because the Bible says nothing about their being subject to the ague in those days. In the case of Esau and Jacob,

to which our friend cites us, there is a great difference of opinion among people of different temperaments. One is prepossessed in favor of Esau, another likes Jacob best, just as we see preferences given among our friends and neighbors of the present day. In our own mind, we do not consider that those who entertain a friendly feeling towards Jacob, are any more to be censured than are the admirers of his hairy brother. Both had their virtues and their faults, and there is no reason why both may not have their friends. There is no sacrifice of principle, that we can see, in loving either or both of them, as far as there is good in them to love. Neither does there seem to us to be any great moral principle involved in the question about Leah's eyes. Our friend above referred to thinks "tender-eyed" means that she had weak eyes; Slow Jamie thinks it means they were pretty (he did not say "beautiful"), and that they were all the charms she had to offset against Rachel, whose features were all beautiful. This is a much pleasanter idea than to imagine that gentle, patient woman afflicted with sore eyes. Besides, poets of the present day apply the word "tender" in the same way, where it would be quite absurd to define it as meaning weak. Here is one instance:—

"When stars are in the quiet skies,
Then most I think of thee;
Bend on me then thy tender eyes
As stars look on the sea."

Think of the lady here addressed as having weak or inflamed eyes! As to Leah, the case may not be quite so clear, it is true, still we are inclined to the merciful side of the question, whether it can be considered strictly orthodox or not.

For our own part we like to read these old stories as told in Slow Jamie's familiar way. He does not profess to be writing from inspiration, but he is a man whose calling has led him to give much thought and study to sacred things, and from his familiarity with the history of the country and characteristics of the people, as well as from the every-day, common sense way he has of telling things, he seems peculiarly fitted to throw these narratives, brief and indefinitely sketched as they are in the Bible, into a form at once pleasing and instructive to read. We do not intend to publish articles of "questionable character" or "inculcating false moral principles," and are not aware that anything of the kind has ever appeared in our columns, unless it might have been in the case of Mr. Stunner and John Farmer, whose principles we must say are not to be commended for general practice.

So many readers have expressed themselves pleased with Slow Jamie's Bible Stories, from the very fact that they were so pleasantly told, and so free from attempts to inculcate sectarian views, though he is himself a preacher, that we must confess to some surprise at the nature of the objections stated by our correspondent. The differences of opinion mentioned are mere matters of taste, influenced by early prejudices and education, and both may be right or both wrong without in any way affecting any question of principle or morals. We are willing to submit the case of Leah's eyes, as well as the rival virtues of Jacob and Esau, to any one who has a better knowledge of the original language in which the Bible was written than we have, and shall expect to be just as wise as we are now, whichever way it may be decided.

A very pretty illustration of dinner table gentility was given at a hotel in a neighboring city a few days since. A young couple, apparently not long married, sat directly opposite us at table. Near the bride sat a gentleman evidently an intimate friend of the husband, and acquainted with both. The little lady was very dainty as to what she would eat. She sipped a spoonful or two of soup, then sent it away and took some broiled fish. This she minced over for awhile with her fork in one hand and a morsel of bread in the other, then sent it away and had her dessert of pie and ice cream, with which she trifled while her husband and his friend went through with a hearty meal. Being obliged to leave promptly at the business hour, the gentlemen shook hands with the lady and went out, leaving her at the table. The moment they were gone, she called the waiter and ordered a plate of boiled beef, which was brought, and she commenced in the good honest way, with both knife and fork, and made out a sensible dinner of beef, greens, etcetera.

Query. Is it unfashionable for a lady to eat what she wants in presence of her husband?

At the same table a little child was brought in and seated in a high chair beside his mother. His bright eyes ran over the dishes on the table in an instant, and spying some of the frozen milk in a saucer, he began calling for "keam! keam! ice-keam!"

"O no; not ice cream for the first thing!" said mamma. "Mother's darling boy must have some nice meat and potatoes, and then some ice cream afterwards."

"No! no!" said mother's darling, with eyes staring and hands flying, "ice-keam, keam! ice-keam! ice-keam!"

He got the ice cream, of course. One saucer-full disappeared in a few moments, and then began the call for another, followed by timid maternal remonstrances ending in a second yielding. Spoonful after spoonful the frozen stuff went into the little stomach till it could hold no more.

"Now my darling will have his meat and potato, won't he?" said the tender mother.

"No; no; pie—pie; wants pie!" cried the darling.

In vain the "goody meaty" was placed before him, and urged upon his acceptance by all the tender, nutritious qualities it possessed. The darling shut his eyes against the flesh and opened his mouth for pie.

Of course he got the pie and we left him in the full enjoyment of his victory.

An Old Maid in Trouble.

Nearly three months of leap-year had passed before I, in my simplicity, was aware of my sex's prerogatives for this year, and then I must own some few feminine scruples held me back from using my privilege. But I believe it not only wise, but expedient to use the rights that we already have, before clamoring for those we have not. If we make good and prudent use of leap-year, will it not be a strong argument in favor of farther progress?

There is no disguising the fact that, as an old maid, I am very much despised, there being no niche in the social temple in which such a triangular block will fit. It is in vain that I act up to the rules laid down for woman by her various advisers from St. Paul to Miss Mulock. I am an ugly old maid to the many, and to the pitying few, who call me friend, "a nice sort of old body, a sensible woman, a very sensible woman getting rather old, though; pity she could not get married!" Occasionally some kind body inquires if my eye-sight begins to fail, another inquires if my hair is not getting thin, and rather thinks she sees a grey hair now and then. In fact, all my kind friends seem bent on keeping me in mind of my mortality.

And if any one has cause to mourn when any woman dies leaving a husband behind her, it is myself: for all the newsmongers in the county exclaim, in their zeal to remate the poor man, "There's Dorothy Jones—she!" I am perfectly tired of being pitted on my lonely condition. One suspects I never had an offer, and another has heard me draw a long breath, and guesses I have been disappointed some time! Now, in pure self-defense, I have determined to get married—and as I know no one to whom I would be willing to commit my fate, I must advertise!

When men advertise, they always speak of their wealth and good looks, as if these were matters of primary importance. I acknowledge myself ugly, pre-eminently so. If I excel in nothing else, I defy competition in that! I am poor too; but I recollect the very encouraging declarations of the masculine advisers, that the ugliest countenance becomes beautiful if lighted up by intelligence, and that a woman always looks best in the eyes of a sensible man when plainly dressed without a single ornament! I believe I am acknowledged to be industrious, sensible, and truthful, and also, impress it on your minds, gentlemen, old, poor, and ugly!

Now for the qualifications I require in the man to whom I would give my humble self. Of course he must be sensible, and truthful. If he were not the first he could not be expected to admire virtuous ugliness and modest deformity, and I may also add could not possess the second quality which I esteem valuable as it is rare! He who would rather be deceived than the deceiver, whose soul is imbued with a love of truth for its own sake, who disdains to act as well as speak a lie—must be worthy of high esteem! If in addition to this he can talk with an opponent on politics and religion without anger, if he can patiently bear contradictions in small things, if he can see his own faults and forget those of others, in fine, if he lives up to the golden rule "Doing to others as he desires them to do to him,"—I shall believe him an Apollo in form and feature, though he should have a hump on each shoulder, be bandy legged, cross-eyed, have a nose like a duck's bill, teeth like a shark, and a scar on each cheek!

I care not for his nation, fortune, or profession; I shall not marry a house or family, but the person to whom they may or may not belong! Any one conscious of possessing these qualities, may address

DOROTHY JONES.

P. S.—Should there be any gentleman seek-

ing a wife, whose heart inclines after lying vanities, who claims no more sense than his brothers, but prefers beauty and wealth to truth and ugliness, I will give them such directions as shall not fail to be of the greatest assistance.

Noted People of the Bible.

BY SLOW JAMIE.

NUMBER FIFTEEN.

Moses.—More than three thousand years ago, in a country southeast of this, and nearly third way round the earth, there was a fine lady walking out one morning, when she noticed something strange among the flags which grew in the edge of the river. She sent one of her maidens to bring it out of the water.—Opening a kind of a covered basket, which had been made water-tight with pitch, what do you think they found? A little baby! It was wrapped in swaddling clothes, but when they unrolled these, its little dumpy limbs were naked. She immediately adopted it for her own child. She was proud of it for three reasons. It was a very handsome child. She had discovered it first herself. And she had found it in the river Nile, which they considered a holy stream. It was a common notion among the more ignorant heathen, that the earth, the sea, and even rivers sometimes brought forth children. Saturn was the son and Cybele the daughter of the earth. Venus was brought forth by the foam of the sea. Pharaoh's daughter had too much sense to fall in with this superstition, still she worshipped the river Nile, and was pleased that she found the child there. His name which signifies "drawn out" commemorated the circumstance.

The older sister of the child stood at a distance to see what would happen. Now she comes down and asks the lady if she wishes her to go and find a nurse. She is told to go, and the mother is brought. The babe, which first wept at the sight of strangers, is now pacified. When the child was weaned, it was brought to the princess and educated in the Court of Pharaoh. When forty years of age he went to see the Israelites, his brethren, and found an Egyptian beating an Israelite. He killed the former and hid him in the sand.—Another day he found two of his brethren quarrelling, and endeavored to make peace by a friendly interposition. One of them answered him with a taunt, by which he learned that the secret of his killing the Egyptian taskmaster was divulged. To his bitter chagrin he found that slavery had its usual effects on his countrymen. Their spirit was broken, and a mean, fawning sycophancy had degraded their character.

He fled from Egypt, and sought the other descendants of Abraham in Arabia. As he wandered in the wilderness one day, he came across some girls, shepherdesses, who had just drawn water for their sheep. A number of rough fellows came up and claimed the water. At this juncture, Moses approached, and true to his generous nature, took part with the weak. When they went home and told the story, their father scolded them for not bringing him home to dinner. Perhaps they thought it was not their duty to do so without orders. At all events they went now and brought him to the house. Moses lived forty years with Jethro and kept his flocks. It is hardly necessary to add that he married one of the girls. It was hard for one who had been raised a Prince, surrounded with luxury, to undergo the drudgery of a shepherd's life, still it was hardly so severe a discipline as Joseph underwent.

Forty years rolled round, and the force of habit had rendered a laborious life both tolerable and pleasant, when Moses received a call, out of a miraculous burning bush, to go and liberate his brethren. He was slow to undertake the mission, urging his want of eloquence, and other reasons in excuse, but at last his scruples were overcome, and he returned to Egypt.

I cannot stop to enumerate the many plagues which God brought on the Egyptians, till they were forced to let the people go.—About three million took their journey on foot, and what is remarkable there was not a sick person in all that multitude. They were pursued by an armed force. Undisciplined and badly armed, and encumbered with their children and cattle, they found themselves shut up with a mountain on one side, a bay on the other, the Red Sea before them, and the enemy behind. All at once, the sea opened them a passage. They went through and their enemies trying to follow were drowned.

At Mount Sinai, where he had first seen the burning bush, Moses again met Jehovah. A splendid appearance of light set off by darkness, descended and rested on the top of the mountain. The sound of a trumpet was heard out of the cloud, at first soft and low, it rose louder and louder, till it swelled into a

most terrific sound. Thunder and lightning added to the magnificence of the scene. Moses was called by name, and went up into the cloud which enveloped the mountain. Here he received laws to govern the nation he ruled. Twice he ascended the hill. One time he remained forty days without eating or drinking, and when he returned, the joy of his heart shone out in a supernatural beauty which glowed on his face.

I cannot stop to notice the beautiful tabernacle which he built by divine direction. I cannot dwell on the many vexations with which a rebellious and sensual people annoyed him for forty years. I cannot dilate on the labor of governing and educating a rude people, to prepare a nation of slaves for self government. I can only say that it was far more laborious than keeping sheep in the wilderness, but he succeeded.

Forty years after their departure from Egypt he stood upon the plains of Moab and addressed a new generation, and one that was very different from the one he brought out of Egypt. Of the millions that stood before him, but two individuals had arrived at years of manhood when they crossed the Red Sea forty years before. His head was silvered with the experience of a hundred and twenty years, yet his iron frame retained its vigor, and his brilliant eye was undimmed with age.—He stood erect in the glory of his strength. A sea of faces spread before him, yet not one of that vast assembly could remember when he was anything but an old man. They had all grown up under his eye. He made them a great speech which we have recorded in the book called Deuteronomy. Then he sung the song recorded in the thirty-second chapter. And concluded by blessing each of the tribes separately. He complained of a slow speech and stammering tongue, but his blessing presents the loftiest strains of eloquence that human language will bear.

Having ended his last words, he turned and ascended the mountain of Aharim and from the high peak of Nebo he took a view of the land of Canaan. He had pleaded hard to be permitted to go and see the future residence of the visible church. This, however, was denied because he had manifested some pride and passion at the waters of Meribah. From the top of Nebo, God showed him the land of Canaan from Dan in the North, to Judah in the extreme South. On the same day he lay down in a valley of the mountain, and with no one near him but God, he quietly breathed his last, and his happy spirit took its flight to that paradise of which the earthly Canaan, which he so much longed to visit, was but a feeble type.

Moses was one of the most remarkable men that ever lived. He was the first to separate Church and State; investing Aaron with the ecclesiastical, and Joshua with the civil power; yet he himself was a prophet, priest, and king. He was the meekest man that ever lived, yet the only sin recorded was passion.—His life was divided into three periods of 43 years each, and in every every one he moved in a different sphere. The humblest period was probably the happiest.

Household Varieties.

Agriculturally Speaking.—"Brethren," said an aged preacher at a revival meeting, "I fear I must compare some here to my crop of wheat and potatoes—for you have eyes and see not, ears have ye and hear not!"

A Critic.—The Art Journal says that during one of the late exhibitions of fine arts in New York, a lady who was going to show her appreciation by patronizing some artist, was overheard to pass severe judgment upon several pictures. Pausing before a superb deer piece by Tait, she remarked loudly, as if conscious of the annihilating nature of her strictures:—"How stupid that artist is! to paint a deer with so short a tail! I should have taken this picture if the deer had a fine flowing tail."

The amiable artist happened to be present, and had to leave very suddenly for a room where it was in order to "roar." He is still seeking, we believe, for a deer with a flowing tail.

A Correspondent of an Iowa paper has been seeing sights at the President's levee in Washington this winter. He talks in this way:—"Buchanan is got up on a more elephantine model than I had supposed, and was the largest man I saw in that great assembly. Has a big head, neck like a bull, smooth, pleasant face, and agreeable manners. Miss Lane was the star of the evening, of course. A purist would say she was somewhat overdressed. A friend beside me remarked that she looked like Crawford's statue of Freedom, made for the dome of the Capitol.—I might confirm the remark with the slightly exaggerated addition that she is about as large. If Lord Lyons is not in love with her, he certainly acts like a man in that romantic state of mind, for he 'tucks around' close enough to make his conduct appear rather singular, interpreted on any other supposition. But they do say that it is so. And I don't blame him."

A Sensible Young Lady.—Said a young lady, who was fashionably educated at boarding schools, and indulged in idleness at home, so that there was neither strength nor elasticity in her frame,—"I used to be so feeble that I could not even lift a broom, and the least physical exertion would

make me ill for a week. One sweeping day I went bravely to work, cleaning thoroughly the parlors, three chambers, the front stairs and hall, after which I lay down and rested until noon, when I arose and ate a heartier meal than I had for many a day. Since that time I have occupied some portion of every day in active domestic labor, and not only are all my friends congratulating me upon my improved appearance, but in my whole being—mind, body and spirit—do I experience a wonderful vigor, to which I have hitherto been a stranger. Young ladies, try my Catholicon."

Victoria's Crown.—The crown worn by the Queen of Great Britain at the opening of Parliament is composed of hoops of silver, which are completely covered and concealed by precious stones, having a Maltese cross of diamonds on the top of it. In the centre of this cross is a magnificent sapphire. In front of the crown, above the rim, is another Maltese cross, in the middle of which is the large unpolished ruby which once graced the coronet of the chivalrous Black Prince, and underneath this, in the circular rim, is another immense sapphire. The arches enclose a cap of deep purple, or rather blue velvet; and the rim of the crown, at its base, is clustered with brilliant, and ornamented with *fleur-de-lis* and Maltese crosses equally rich. There are many other precious gems—emeralds and rubies, sapphires, and small clusters of drop pearls of great price. The crown is altogether valued at over half a million of dollars. Indeed, were it possible to re-collect and again bring together such precious stones, this estimate would fall much below their intrinsic value. The old crown of England, made for George III, weighed upwards of seven pounds; but, notwithstanding this gorgeous display of jewelry, independent of the gold cap, the present crown only weighs nineteen ounces and ten pennyweights. It measures seven inches in height from the gold circle to the upper cross, and its diameter at the rim is five inches.

For Our Young Friends.

Poetical Enigma.
In me you find seven letters combined,
No pauses to bother your pate.
Directly you spell the seven letters well,
In me you will find a State.

And number one, you will see, is concerning me,
Numbers one and two we'll have them in,
And my three, one, and two, very likely suits you;
I declare I don't know though it make such a din,
Now my one, three and five, as sure as you are alive,
Denotes a little girl's christian name;
In my three, four, five, six and seven, (which is a little short of eleven),
Another, but a bigger girl's name.

Now my next, you will see, has letters but three,
And like the two others they are a girl's name;
Indeed, as I'm alive, they are seven, three and five,
Now, and they read backwards and forwards the same.

Do not laugh at me, for you will plainly see
In my seven, six, two and five a girl's name,
Although there is letters four, (a good thing there is no more),
No, or they would not read backwards and forwards the same.

And, now, I cannot find, in the seven letters combined,
Indeed, but one more girl's name;
Numbers five, six and two, I think they must do,
Do, or from the girls I'll not get much fame.
Marengo, April 16, 1860. H. M. EVANS.

Scriptural Enigma.
I am composed of 24 letters.
My 13, 10, 21, was a son of Adam.
My 6, 17, 20, 12, was a wife of Lamech.
My 7, 10, 4, 22, 8, 2, is a book of the Old Testament.
My 17, 20, 21, 2, 16, 19, is one of the prophets.
My 6, 11, 15, 8, 23, 1, is one of the apostles.
My 9, 21, 14, 22, 8, was one who walked with God.
My 15, 2, 7, 11, 12, 24, was a bishop of Ephesus.
My 18, 3, 6, 15, 8, was a seaport of Iunnea.
My whole is an American Episcopal divine.
S. J., Greenfield.

Answer to Miscellaneous Enigma of April 14.—MAJOR GENERAL CHESENEY.
Answer to Riddle—HOOPS.

RECOMMENDATION TO FARMERS IN SELECTING THE BEST MOWER AND REAPER.

The committee on Agricultural Implements of the last New York State Fair, held at Albany, say to farmers: "We think the improvements put upon this machine (Kirby's American Harvester), since the last State Fair, justify us in awarding it to the award; ('THE MOST VALUABLE MACHINE OR IMPLEMENT FOR THE FARMER, EITHER NEWLY INVENTED OR AN IMPROVEMENT ON ANY NOW IN USE.')

EGYPTIAN CORN.

THE subscriber offers to farmers throughout the country the EGYPTIAN CORN, which upon trial was found to ripen planted even the first of July. It is estimated, from its very prolific qualities, to yield 200 bushels per acre, and weighs by *several measures* 65 pounds to the bushel. This corn was produced from some procured direct from Mr. JONES, our Consul Agent, directly on his return from Egypt.

It needs no different culture from that of other varieties, and in the South two crops can be raised in one season on the same ground. It grows in the form of a tree, and twenty-two ears have grown upon one stalk, and will average from five to fifteen. For domestic use it is unequalled. When ground and properly boiled, it is equal in color and fineness to wheat flour. As a *forage crop*, by sowing in drills or broadcast, for early feed, there is no kind of corn so well adapted to milk cows, and none that will yield half the value in stalks or corn.

It can be successfully grown in any State of the Union from Maine to Texas. I can give the most satisfactory references that the corn is, in every respect, what I represent it to be, and further, I am the only person throughout the country who has this variety of corn. Having secured a quantity, I am now able to fill all orders, for those desirous of testing it.

To any person who will enclose in a letter, One Dollar, in Stamps or Currency, directed to me, I will send, postage paid, sufficient corn to produce enough to plant, the following year, from twenty to thirty acres. Also, directions for planting and cultivation.

Any person who will get up a club of five, will receive a package gratis.

Give your full name, post office, county, and State written plain, so that no errors may occur.

Address M. E. CRAWFORD, 14-St. Sandwich, DeKalb Co., Illinois.

HIGHLY IMPORTANT INFORMATION
For Married Persons. Send stamp to 10-41* R. H. ADAMS, M. D., Boston, Mass.

1859. WINTER ARRANGEMENT. 1860.

MICHIGAN SOUTHERN AND DETROIT, MONROE and TOLEDO RAIL ROAD.

MONROE, CHICAGO, TOLEDO, CINCINNATI AND CLEVELAND LINE.

With its connections, forms a Through Route from Detroit to Monroe, Adrian, Chicago, Toledo, Sandusky, Cleveland, Dayton, Hamilton, Cincinnati, Pittsburgh, Wheeling, Harrisburg, Philadelphia, Baltimore, Washington, Erie, Dunkirk, Buffalo, Albany, New York, Boston, Montreal, Quebec, Portland, Boston's Point, and all points interior, in Ohio, Pennsylvania, New York, and the New England States, and all points West and South West.

On and after Monday, April 9th, 1860, Passenger Trains will run as follows:

ARRANGEMENT OF TRAINS.

FROM DETROIT—Mail and Express, daily, except Sunday, at 7:30 A. M., arriving in Toledo at 10:15 A. M., connecting with the Express Train from Toledo at 10:30 A. M. (via old road), arriving in Chicago at 8:15 A. M. Chicago and Cincinnati Express, daily, except Sunday, at 7:40 P. M., arriving in Toledo at 10:30 P. M., and at 11:20 P. M., connecting with the Lightning Express Train for Chicago (via old road), arriving in Chicago at 8:00 A. M.

Toledo accommodation, daily, except Sunday, at 12:15 P. M., arriving in Toledo at 4:00 P. M., connecting with Express train for Cleveland, Buffalo and New York. FROM CHICAGO—Mail and Express, daily, except Sunday (via old road), at 8 A. M. and Lightning Express, daily, except Sunday, via Air Line, at 8:00 A. M., making connection with 4:00 P. M. train from Toledo at Air Line Junction, arriving in Detroit at 6:50 P. M. Chicago and Montreal Express, daily, except Saturday, at 8:00 P. M., via old road and Adrian, arriving at Detroit at 7:05 A. M.

FROM TOLEDO—Chicago and Montreal Express, daily, except Sunday, at 4:15 A. M., arriving in Detroit at 7:05 A. M.

Mail and Express, daily, except Sunday, at 4:05 P. M., arriving at Detroit at 6:50 P. M.

Detroit Accommodation, daily, except Sunday, at 11:00 A. M., arriving in Detroit at 8:00 P. M.

CONNECTIONS:

Trains from Detroit connect at Adrian with Michigan Southern Main Line for Chicago, with New Albany and Salem Railroad, at the crossing of that line, and at Chicago with all Roads for the Northwest and South.

Connect also at Adrian with Jackson Branch Trains for Jackson.

Connect at Toledo with Dayton and Michigan Road, for Dayton, Hamilton and Cincinnati; with the Cleveland and Toledo Road, for Sandusky, Cleveland, Pittsburgh, Dunkirk, Buffalo, Albany, Boston and New York; with Wabash Valley Road for Evansville, Indianapolis, Southwest, and with Air Line Rail Road for Bryan, Kendallville, Ligonier and Goshen.

Trains from Chicago and Toledo connect at Detroit with Grand Trunk Railroad of Sarnia, Toronto, Prescott, Montreal, Quebec, Portland and Boston; with Western Railway for Niagara Falls, Buffalo, Albany, New York and Boston, also with Detroit and Milwaukee Railway, for Grand Rapids, Grand Haven and intermediate Stations.

Freight Trains leave daily, except Sunday, as follows:

FOR TOLEDO, at 12:15 P. M., arriving at Toledo at 4:00 P. M.

FOR CHICAGO, at 4:00 P. M., arriving at Chicago at 9:00 P. M.

Trains are run by Chicago time, which is Twenty Minutes slower than Detroit time.

Woodruff's Patent Sleeping Cars accompany all night trains on this route.

Time and Fare the same as by any other Rail Road route.

No change of cars between Detroit and Chicago. Baggage checked through to all points East & West.

J. D. CAMPBELL, GENERAL SUP'T, Toledo, Ohio.

L. P. KNIGHT, Agent, Detroit.

AMERICAN AND FOREIGN STEREOSCOPIC EMPORIUM.

E. ANTHONY, 308 Broadway, New York.

After May 1st, 1860, at 501 Broadway, two doors from the St. Nicholas Hotel.

THE Stereoscope is the most instructive, interesting, entertaining, amusing, and exciting of modern inventions. None are too young, none too old, none too intelligent, none too uneducated, to acknowledge its worth and beauty.

No home is complete without it, and it must and will penetrate everywhere. It presents to your view every part of the world, in all the relief, boldness, perspective, and sharpness of detail, as if you were on the spot.

Photographers are everywhere exploring Europe, Asia, Africa, America, in search of the grand and the beautiful, and the results of their skill are constantly enriching our stock.

We have an immense variety of paper Views of Scenes in Paris, London, England, Scotland, Ireland, Wales, France, Belgium, Holland, Switzerland, Spain, The Rhine, Versailles, St. Cloud, Fontainebleau, Tuilleries, Italy, Turkey, Egypt, Athens, the Holy Land, China, India, Crystal Palace, also Groups Historical, amusing, marine scenes, breakfast scenes, pic-nics, statuary, &c. &c. An exquisite assortment of Illuminated Editions of Palaces, Churches, and Cathedrals of France, Italy, &c. The effect of these illuminated views is most remarkable.

Every gentleman of wealth and refined taste should have in his drawing-room some of our exquisite views on glass, with a revolving stereoscope, showing 12, 25, 50 or 100 scenes. Nothing can be more fascinating, and one can offer no greater treat to a friend fond of the picturesque and beautiful.

Anthony's Instantaneous Stereoscopic Views are the latest photographic wonder. They are taken in the fortieth part of a second, and everything no matter how rapidly it may be moving, is depicted as sharply and distinctly as if it had been perfectly at rest. This gives an additional value, for to the beauties of inanimate nature adds the charm of life and motion. The process is a discovery of our own, and being unknown in Europe, we receive from London and Paris large orders for Anthony's Instantaneous views of American life and scenery.

Among other things we have just published Stereoscopic Illustrations of the scene of the FULTON STREET PRAYER MEETING, in which many hearts feel an interest. The particulars of this will be found in our catalogue.

Our catalogue of subjects and prices will be forwarded to any address on receipt of a stamp. Parties at a distance sending us \$3, \$5, \$10, \$15, \$20 or \$25 can have a good instrument and such pictures as they may request, sent by Express.

Views alone, (without instrument) can be sent by mail. Parties who wish to be advised of everything really valuable in the line that comes out, we will keep them posted at our own expense.

Men of leisure will find Photography a most fascinating and delightful amusement. We are prepared to fit out amateurs with everything necessary for their success together with instructions "How to take Stereoscopic Pictures."

Importer and Manufacturer of Photographic Materials, Stereoscopes and Stereoscopic Views.

Merchants from every section of the country are invited to make an examination of our stock, as our discount to the trade will be liberal.

To Photographers.—First class stereoscopic Negatives wanted. Send by mail a print unmounted, with price of Negative. [Cut this out for future reference.] 3-3m

SUBSOIL AND JOINTER PLOWS,

Manufactured by Burnham & Co., Battle Creek, MICHIGAN.

Price of Subsoil Plow for one team, with draft rod, \$85.00.

Price of the Curtis Jointer, or double Plow, for one team, \$14.00.

A NEW, CERTAIN, AND THE ONLY CURE OF Nervous Debility. Its Cause, Symptoms, Effects, and Radical Cure. By a former sufferer. For the benefit of young men. Enclose two stamps simply. Address Box 319, Boston, Mass.

IT IS NOT TOO MUCH TO SAY SINCE ALL OLD AND YOUNG AFFIRM ITS TRUTH.

Via: That Professor Wood's Hair Restorative

Will preserve infallibly the growth and color of the hair, it used two or three times a week, to any imaginable age. Perfectly restores the gray, covers the bald with nature's own ornament, the hair; make it more soft and beautiful than any oil, and preserve the scalp free from all diseases to the greatest age. Statesmen, Judges, Attorneys, Doctors, Clergymen, Professional men and Gentlemen and Ladies of all classes, all over the world, bear testimony that we do not say too much in its favor. Read the following and judge:

Wickory Grove, St. Charles Co., Mo., Nov. 19, 1857. Prof. O. J. Wood—Dear Sir: Some time last summer we were induced to use some of your Hair Restorative, and its effects were so wonderful, we feel it our duty to you and the afflicted, to report it.

Our little son's head for some time had been perfectly covered with sores, and some called it scald head. The hair almost entirely came off in consequence, when a friend, seeing his sufferings, advised us to use your Restorative; we did so with little hope of success, but to our surprise, and that of all our friends, a very few applications removed the disease entirely, and a new and luxuriant crop of hair soon started out, and we can now say that our boy has as healthy a scalp, and as luxuriant a crop of hair as any other child. We can, therefore, and do hereby, recommend your Restorative, as a perfect remedy for all diseases of the scalp and hair. We are yours respectfully, GEO. W. HIGGINBOTHAM, SARAH A. HIGGINBOTHAM.

THE BEST MACHINE IN THE WORLD.

KIRBY'S AMERICAN HARVESTER!

THE MOST VALUABLE IMPLEMENT FOR THE FARMER.

"Contains the most valuable improvement of any Harvester in Use."

WE have the pleasure of offering Farmers the Improved Kirby's American Harvester for 1860, which stands now unrivalled for facility of operation, lightness of draft, adaptation to uneven surfaces, strength, simplicity and durability, and is pronounced by those who have tested the various machines in use, to be the most complete combined Reaper and Mower "either newly invented, or an improvement on any now in use."

First Premiums at State Fairs and Trials as the BEST REAPER AND MOWER COMBINED.

At the last New York State Fair, it was the only Harvester that received a Premium among some forty machines on exhibition. The Judges awarded it a Silver Medal and Diploma, as "The most valuable Machine or Implement for the Farmer, either newly invented or an improvement on any now in use." They say in their report: "We think the improvements put upon this machine since the last State Fair are of such a character as to justify us in this award; and the exceeding simplicity and great strength of the machine must commend it to the farming community."

At the Wisconsin State Fair, last fall, it attracted especial attention, and after a very careful inspection by the Committee, was honored with three Diplomas—as a Mower, a combined Reaper and Mower, and for the one-horse Harvester.

At the Michigan State Fair last fall, it received the 1st Premium as the Best Combined Reaper & Mower.

At the Tennessee State Fair last fall it received the 1st Premium as the best Combined Reaper and Mower.

At the Tennessee State Fair last summer, it received the First Premium as the Best Combined Reaper and Mower.

At the last Indiana State Fair, it received the First Premium as the best Combined Reaper and Mower.

At the Indiana State Fair in 1858, it received the First Premium as the best Combined Reaper and Mower.

All premiums on machines as Mowers only, or Reapers only, do not recommend to farmers what they want, viz:—

THE BEST COMBINED REAPING AND MOWING MACHINE.

The Factory Price of the Improved Harvester for 1860, will be \$125; for Mower, \$110; for Little Buffalo Harvester, \$100—Mowers, \$90.

For further particulars address L. J. BUSH, Gen'l Agent, Toledo, Ohio.

11-3m The Harvesters are sold by the following agents in Michigan:

E. TINDALL, Tecumseh, A. V. PANTLID, Paw Paw, J. P. HOLLY, Pontiac, J. A. COON, Butler, JOHN ALLEN, Plymouth, J. E. EARL, Bronson, WM. TAYLOR, do W. B. BESSAN, Niles, A. M. KIRBY, Leelle, T. G. LIMBROCK, Trenton, M. ROGERS, Ann Arbor, WM. SPENCER, Jackson, WM. M. THURBER, Flint, E. T. GREGG, Marshall, ED & H. E. GREGG, Owosso, O. H. FOOT, Grand Rapids, R. N. DRY, Ionia, S. H. SOUTHWORTH, Kalamazoo, J. W. BUEWELL, Livingston, TALBOT & CLEVELAND, Centerville, ERASTUS THATCHER, Pontiac, N. O. & W. W. CHILDS, Charlotte.

HOWE'S IMPROVED HAY OR CATTLE SCALES! THE BEST IN USE.

FIRST PREMIUM OVER FAIRBANKS, at Vermont State Fair, '57 and '58.

FIRST PREMIUM and no competition in 1859.

FIRST PREMIUM at 18 different State Fairs.

SILVER & BRONZE MEDALS at American Institute Fair, N. Y., 1857.

Howe's Scales for all uses, have Great Simplicity, Wonderful Accuracy.

Require no Pitt; may be set on top of the ground, or on a barn floor, and easily moved.

No Check Rod; No Friction on Knife Edges; all friction received on Balls. Weigh truly if not level.

Delivered at any Railroad Station in the United States or Canada, set up, and warranted to give entire satisfaction or taken back.

Send for Circulars, and price lists, with account of trial of Scales, between Howe and Fairbanks, at Vermont State Fair, to JAMES G. DUDLEY, General Western Agent, 98 Main St., Buffalo, N. Y.

44-1y

CAST STEEL BELLS, For Churches, Academies, Fire Alarms, Factories, &c., FROM SHEFFIELD, ENGLAND.

HAVE been tested in all climates, Europe and America. Weigh less; cost less per pound; have better tones; can be heard farther than other bells. They cost 50 per cent less than

THE BEST COMPOSITION BELLS, Which are also sold by me at Makers' Prices.

BROKEN BELLS TAKEN IN EXCHANGE, Or re-cast on short notice. Such bells will nearly pay for Steel Bells of same size.

Send for Circular. Bells delivered in all parts of the United States or Canada, by JAMES G. DUDLEY, 98 Main St., Buffalo, N. Y.

44-1y

HERRING'S PATENT Fire and Burglar-Proof Safes, WITH HALL'S PATENT POWDER-PROOF LOCKS, HAVE NEVER FAILED.

IN MORE THAN 300 DISASTROUS FIRES. The Safest and Best Safe in Use.

Delivered at any Railroad Station in the United States, or Canada, at the very lowest rates, by JAMES G. DUDLEY, Sole Agent, at 98 Main St., Buffalo, N. Y.

44-1y

PEACH TREES! PEACH TREES!!

FOR SALE—5,000 Peach Trees, of the most approved kinds, as: Early Late Crawford, Troth's, Large Early York, Old Mission, Ward's Late Tree, Serrano Early York, Rose, etc.

Trees 4 to 5 feet, \$10.00 per 100; \$50.00 per 1000. 8 to 4. 7.00 60.00

Nursery 1/2 mile south of Plymouth village, Wayne Co., Mich. 9-2m G. YOUNG & PINNEY.

Prince Albert Potatoes for Sale.

WARRANTED GENUINE. Price One Dollar per bushel, including packages; two bbls. to one order, Fire Dollars; delivered at the R. R. depot. Address ARA U. SUTTON, Tecumseh, Mich. March 11th, 1860. 11-6w

Seeds and Plants by Mail.

2,000 LAWTON BLACKBERRY SEED, \$1.

200 Lawton Blackberry root cuttings, \$1.

Wilson, Peabody, or Hooker Strawberries, \$1.

2 ounces Arctic Pearl Corn, ripens in 7 weeks, \$1.

1 Diana Grape vine, \$1.

Packages sent free by mail. Send for a free circular of the Lyons Nursery. EWAN SYLVESTER, Lyons, N. Y. 19-1m

THE WETHERFIELD SEED SOWER

FOR SALE at 14 PENFIELD'S, 108 Woodward Avenue.

SEEDS, SEEDS! FRESH SHAKER SEEDS, OF LAST YEARS

growth and warranted. Also, Spring Wheat, Sweet Potatoes of several kinds, King Philip, Flour, Dutch Eggs and Sweet Corn, Timothy Clover, Barley &c. &c. 25

108 Woodward Ave Detroit.

New Rochelle, Lawton, Blackberry.

FINE PLANTS, carefully packed and sent according to directions, at One Dollar per dozen. Five dozen for \$5 Dollars; ten dozen for \$9 Dollars. Direct to 19-44 CHARLES BETTS, Burr Oak, Mich.

THE BEST MACHINE IN THE WORLD.

KIRBY'S AMERICAN HARVESTER!

THE MOST VALUABLE IMPLEMENT FOR THE FARMER.

"Contains the most valuable improvement of any Harvester in Use."

WE have the pleasure of offering Farmers the Improved Kirby's American Harvester for 1860, which stands now unrivalled for facility of operation, lightness of draft, adaptation to uneven surfaces, strength, simplicity and durability, and is pronounced by those who have tested the various machines in use, to be the most complete combined Reaper and Mower "either newly invented, or an improvement on any now in use."

First Premiums at State Fairs and Trials as the BEST REAPER AND MOWER COMBINED.

At the last New York State Fair, it was the only Harvester that received a Premium among some forty machines on exhibition. The Judges awarded it a Silver Medal and Diploma, as "The most valuable Machine or Implement for the Farmer, either newly invented or an improvement on any now in use." They say in their report: "We think the improvements put upon this machine since the last State Fair are of such a character as to justify us in this award; and the exceeding simplicity and great strength of the machine must commend it to the farming community."

At the Wisconsin State Fair, last fall, it attracted especial attention, and after a very careful inspection by the Committee, was honored with three Diplomas—as a Mower, a combined Reaper and Mower, and for the one-horse Harvester.

At the Michigan State Fair last fall, it received the 1st Premium as the Best Combined Reaper & Mower.

At the Tennessee State Fair last fall it received the 1st Premium as the best Combined Reaper and Mower.

At the Tennessee State Fair last summer, it received the First Premium as the Best Combined Reaper and Mower.

At the last Indiana State Fair, it received the First Premium as the best Combined Reaper and Mower.

At the Indiana State Fair in 1858, it received the First Premium as the best Combined Reaper and Mower.

All premiums on machines as Mowers only, or Reapers only, do not recommend to farmers what they want, viz:—

THE BEST COMBINED REAPING AND MOWING MACHINE.

The Factory Price of the Improved Harvester for 1860, will be \$125; for Mower, \$110; for Little Buffalo Harvester, \$100—Mowers, \$90.

For further particulars address L. J. BUSH, Gen'l Agent, Toledo, Ohio.

11-3m The Harvesters are sold by the following agents in Michigan:

E. TINDALL, Tecumseh, A. V. PANTLID, Paw Paw, J. P. HOLLY, Pontiac, J. A. COON, Butler, JOHN ALLEN, Plymouth, J. E. EARL, Bronson, WM. TAYLOR, do W. B. BESSAN, Niles, A. M. KIRBY, Leelle, T. G. LIMBROCK, Trenton, M. ROGERS, Ann Arbor, WM. SPENCER, Jackson, WM. M. THURBER, Flint, E. T. GREGG, Marshall, ED & H. E. GREGG, Owosso, O. H. FOOT, Grand Rapids, R. N. DRY, Ionia, S. H. SOUTHWORTH, Kalamazoo, J. W. BUEWELL, Livingston, TALBOT & CLEVELAND, Centerville, ERASTUS THATCHER, Pontiac, N. O. & W. W. CHILDS, Charlotte.

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Howe's Scales for all uses, have Great Simplicity

MICHIGAN FARMER.

R. F. JOHNSTONE, EDITOR.
Publication Office, 130 Jefferson Avenue,
DETROIT, MICHIGAN.

S. FOLSON,
WOOL DEALER,
90 Woodward Avenue,
DETROIT, MICHIGAN.

THE MARKETS.

Breadstuffs.

We notice this week that there has been a decided improvement in the demand for flour and grain, and with that demand prices have advanced. Flour may be set down as being worth about 25 cents per lb. more in this market than it was at this time last week. Sales have been made of good extras at \$5.97 1/2 @ 6.12 1/2. Sales are now made for shipment, and there are buyers from the east who are preparing to take advantage of the opening of the New York canal at the earliest moment. There is also prospect of a more active demand for export at New York, and especially for the best grades of white Michigan wheat.

The demand for red and mixed wheats is always easily supplied, but for choice white, grown clean and free from mixture, there is always a market at the extreme rates. Such wheat at present commands \$1.70 in the New York market, and ranks with the best Kentucky white, which always bears the highest rates. In the street good samples of white wheat bring \$1.32 and for red \$1.20 @ 1.25 is off red according to quality. The system of inspection adopted here is doing much to establish the character of the grain and flour that goes from this State; and also to keep it separate from inferior kinds that come here merely for storage.

Corn—Has advanced somewhat, sales being made from store for shipment at 55 cents, and 50 cents is paid in the street.

Oats—Are worth 36 cents, and show quite an advance. Barley—Good prime sells at \$1.20 @ 1.25 per 100 lbs.

Corn meal and Feed—Remain steady, with a good supply.

Eggs—Are not quite so plenty as they have been, and prices are somewhat better.

Apples—Are now bringing good prices. Very prime winter apples well selected and sound are worth \$4.25 @ 5.00 per bbl. Dried apples are worth \$1.40 per bushel.

Hay—Is not so firm as it was, the stock being considerable and all demands upon it.

Potatoes—Are quite plenty, and we note no change in prices for them. It seems doubtful whether they will have much of an advance this season, though it may be, as the season advances, and farmers get busy with their work that there will be a less supply and consequently better prices.

The prices for this week are—

Extra white wheat flour @ bbl.	\$ 5.75 @ 6.12
Superfine flour @ bbl.	\$ 5.00 @ 5.50
White wheat @ bush.	\$ 1.25 @ 1.35
Red wheat @ bush.	\$ 1.15 @ 1.25
Corn in the street @ bush.	\$ 0.45 @ 0.47
Corn in store @ bush.	\$ 0.50 @ 0.55
Oats @ bush.	\$ 0.35 @ 0.37
Rye @ bush.	\$ 0.75 @ 0.78
Barley @ bush.	\$ 1.25 @ 1.35
Corn meal @ bush.	\$ 1.00 @ 1.12 1/2
Brass @ ton.	\$ 10.00 @ 10.50
Cassia middlings @ ton.	\$ 18.00 @ 19.00
Fine middlings @ ton.	\$ 22.00 @ 24.00
Butter, fresh roll @ lb.	\$ 0.12 @ 0.14
Butter in brick per lb.	\$ 0.10 @ 0.12
Eggs @ doz.	\$ 0.10 @ 0.11
Potatoes, Michigan @ bush.	\$ 0.90 @ 1.00
Common sorts @ bush.	\$ 0.75 @ 0.84
Apples, green, best quality @ bush.	\$ 4.00 @ 5.00
Apples, green, 2nd quality @ bush.	\$ 3.25 @ 4.00
Oranges @ bush.	\$ 4.00 @ 4.25
Timothy seed, per bush.	\$ 3.50 @ 4.00
Hay, timothy @ ton.	\$ 10.00 @ 12.00
Hay, mixed @ ton.	\$ 8.00 @ 10.00

Live Stock.—Cattle supply here continues to be good. Drivers and parties who have been feeding through the winter are bringing forward very many good cattle, and seem to be anxious to sell. The sale this week of several yoke at 3 1/2 and 3 3/4 live weight, the latter weighing from 1,200 to 1,400 pounds. Sheep are selling from 35 @ 45 cents for the dressed carcass, which weighs from 40 @ 45 pounds. Hogs are selling at 6 cents. Hogs are steady at 6 cents. Calves of good size and quality are coming into market freely, and are selling ranging from \$2.50 @ 4.00 and \$3.00.

The New York market reports this week about a very full supply of cattle at the east, with no advance upon the decline of last week. Good fair cattle are worth in that market at the present date, but 2 1/2 cents according to the estimate and very few were sold at 10 cents except the prime. We note that the New York Tribune remarks relative to the market: "There is not the least prospect of any considerable rise in the price of live stock this spring, and if butchers will accept of a reasonable profit, every body can afford to eat roast beef."

The wool market does not present any new features this week. Here the sales are altogether confined to better varieties, of which there is a good stock on hand both here and at the east. About 4,000 lbs. have been purchased during the past week at prices ranging a shade lower than those of last week for the coarser kinds, and at 4 1/2 for the very best parcels. The light stock of fleece wool that remains on hand is spoken of generally by eastern reports, and tends to keep up the rates. This complete consumption of the whole of last year's clip is generally allowed by the manufacturers, and owing chiefly to the fact that the clip of this season is generally of a better quality, and the consequence is a dull market and overstock of goods, and less consumption.

We shall not, therefore, be much surprised to see a considerable decline on the part of buyers, to avoid prices downward from this time till the close of the wool market, by representations that the demand will not admit of paying the prices asked by the growers.

SECRET ART OF CATCHING FISH in any water, so fast as you can pull them out, sent for 25 cts. This is no humbug. Address: J. A. BROWN, 10-12-14.

DRAIN TILE! We keep constantly on hand the different sizes of drain tile, and sell them at the lowest prices. Address: J. A. BROWN, 10-12-14.

Wilson's Albany Seedling Strawberry. For sale, fifty thousand, at five dollars per thousand, or three dollars for five hundred; packed in boxes and delivered at the rate of \$1.00 per box.

Webster's Unabridged Dictionary. NEW PICTORIAL EDITION. 1600 PICTORIAL ILLUSTRATIONS. IN ONE VOLUME OF 1750 PAGES.

PERSONS WHO WISH TO GET THE BEST COPY OF WEBSTER'S "GET THE BEST COPY OF WEBSTER'S"

The trade supplied by F. Raymond & Co., Detroit.

STOCK BREEDERS' COLUMN.

A. S. BROOKS,
WEST NOVI, MICH.
BREEDER OF SHORTHORN CATTLE.
FOR SALE, twenty head of pure bred Shorthorn stock, bred from recent importations, ranging from calves to four year old bulls and heifers.
For further information apply to A. S. BROOKS, 11-8m West Novi, Oakland co., Mich.

DURHAM BULL FOR SALE.
The thorough bred Durham bull KENTUCKY, described in No. 48 of Michigan Stock Register, (See Mich. Farmer, Sept. 1887), can be bought at a reasonable price. Calved July 8, 1886. Sire, Robin 918 A. Dam, Daphne got by Marcor 701 A. Robin was bred by H. Clay, Jr., of Kentucky. This bull was brought to Michigan in 1887. For further particulars inquire of JAMES BIRNEY, Bay City, Mich. 12-1m

FOR SALE—A four year old Stallion of Messenger and Melburn Chief, coloring of dark brown color, and symmetrical form. He was sired by Mambrino Chief, owned by Hon. James B. Clay, of Ashland, Kentucky; his dam was one of Col. Thompson's blooded mares. He can be seen at the residence of JAMES BIRNEY, Bay City, Mich. 12-1m

VALUABLE HORSE STOCK

Offered at Private Sale.

THE subscriber having been engaged in breeding from the most valuable strains of thorough bred and full bred trotting and road horses for several years, is now prepared to dispose of a number of his young stock on liberal terms, and he calls the attention of those who desire to procure animals for breeding to the colts he offers for sale. An opportunity is now given to breeders to make a selection from stock bred from the best horses that have ever been introduced into Michigan or elsewhere, also colts bred from the stock of Glencoe, Boston, Imported Stoneyhopper, Abidallah, Vermont Black Hawk and Long Island Black Hawk, all of them remarkable for size, style and action.

For further particulars address

E. N. WILLCOX, Detroit, Mich. April 4th, 1880. 14f.

CAHOON'S PATENT

BROADCAST SEED SOWER!



For Sowing Wheat, Oats, Barley, Grass Seeds, &c.

THE HAND MACHINE sows from four to eight acres per hour at a common walking gait, throwing out wheat about forty feet wide and Grass Seed twenty feet.

THE HORSE POWER MACHINE at the usual walking gait of a horse sows from ten to fifteen acres per hour, throwing wheat about sixty feet at each passage.

The vast superiority of this machine over all others, as shown in the perfect regular and even distribution of the seed, and the wonderful rapidity with which the work is performed, combined with their perfect simplicity and durability, have already placed them in the front ranks of labor saving agricultural implements.

A saving of three-fourths of the labor and one fourth of the seed used in hand sowing is effected by using these machines. A person entirely unused to sowing by hand, can use either machine with perfect success.

They are warranted to give perfect satisfaction and to save their cost in less time than any other farm implement yet introduced.

Large numbers of these machines have been sold, and in all instances, when proper care has been used in their operation, they have given the most perfect satisfaction.

These machines can be purchased of Agents in all the principal places in the State. For further particulars address

P. B. SANBORN, General Agent for Michigan and Western Canada. Office at E. B. & W. R. Noyes' Hardware, 86 Woodward Avenue Detroit, Mich. 12-2m

DAINES' AMERICAN

DRAIN TILE MAKER.

The Best and Cheapest Tile Machine in the World.

Forty-one first Premiums awarded to it at State and County Fairs. First Premium at the National Fair, at Louisville, Ky., 1887.

The TILE MACHINE invented by JOHN DAINES, of Birmingham, Oklahoma, Mich., is now being manufactured in the most thorough manner, and is offered to the farming community as the

Cheapest, Most Labor-Saving and Most Complete Invention,

and enabling farmers to make their own Tiles, that has not been put before the agriculturists of the United States, at a reduced price.

These machines are made of iron, are easily worked, and may be used to manufacture a first rate article after a few hours practice.

They cost delivered in Detroit only \$100. They have two dies for three and four inch tiles, and extra dies to accompany the machine cost \$20.00 each.

These machines will manufacture per day, according to the force employed, from 150 TO 250 ROWS OF DRAIN TILE OF FIVE FEET LENGTH. The machine weighs but 500 pounds, and can be packed and sent to any part of the United States, or to foreign countries, as easily as a piano.

With this machine, any farmer who has a fair quality of clay on his farm, can manufacture his own Tiles at a cheap rate, the only saving of the price of the machine by avoiding the cost of transportation. The machine when in operation, takes up no more room than an ordinary sized kitchen table; it may be worked by two or three men as may be found most convenient and economical, or a man and two boys can keep it in full operation.

For Simplicity, Durability, Economy, Cheapness, and amount of work, this Tile Maker Challenges the World.

At the present time, when thorough draining has become a necessity on alluvial lands, it offers the simplest and cheapest means of furnishing farmers with a drain tile for their superior crops, and a material how used for that purpose.

Applications for these machines may be addressed to JOHN DAINES, Birmingham, Mich.

THE WILLIS' STUMP PULLER

Is the most powerful and most economical machine in use for pulling stumps, and will clear a field in less time than any other invention of the kind. It is pulled with the most common horse and cow power.

Twenty-three stumps have been pulled with this machine in one day, and the machine is now being used in many places to pull stumps.

The machine is made of iron, and is easily worked, and may be used to pull stumps after a few hours practice.

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SANFORD'S LIVER INVIGORATOR. NEVER DEBILITATES.

It is compounded entirely from Gums, and has become an established fact, a Standard Medicine, known and approved, and is now resorted to for diseases for which it is the only cure. Thousands who had given up all morose unsolicited certificates.

The dose must be adapted to the individual, taking titles as to act gently on the use of the LIVER, and it will cure Liver, Biliousness, Summer Diarrhea, Dropsy, Habitual Constipation, Cholera, Malaria, Female Weakness, and all the ailments of the system.

It will cure, (as thousands testify), in twenty-three teaspoonfuls, the most violent attack.

All who use it are giving their testimony in its favor.

MIX WATER IN THE MOUTH WITH THE INVIGORATOR, AND SWALLOW BOTH TOGETHER.

Price One Dollar per Bottle.

—ALSO—

SANFORD'S FAMILY

CATHARTIC PILLS

COMPOUNDED FROM

Pure Vegetable Extracts, and put up in GLASS CASES, Air Tight, and will keep in any climate.

The Family Cathartic Pills are used in his practice.

The constantly increasing demand from those who have used the pills, and the satisfaction in regard to their use, has led to the reach of all.

know that different Carthartics act on different parts of the system.

The Family Cathartic Pills, with reference to an extract, which act on the alimentary canal, and are cases where the cathartic action is required.

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